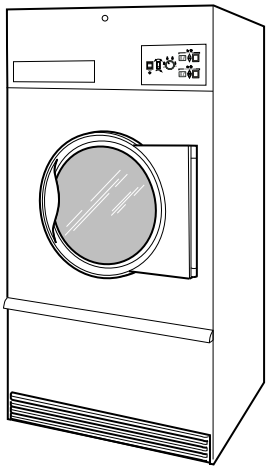
Tumble Dryers

50 Pound (22.7 Kilogram) Capacity
75 Pound (34 Kilogram) Capacity
Starting Serial No. 0904004427
Refer to Page 8 for Model Identification

Installation/Operation/Maintenance



TMB1277C_SVG

Original Instructions
Keep These Instructions for Future Reference.
(If this machine changes ownership, this manual must accompany machine.)

Alliance Laundry Systems

www.alliancelaundry.com

Part No. 70457901ENR11
September 2014

Front Matter

Installation must conform with local codes or, in the absence of local codes, with:

In the U.S.A., installation must conform to the latest edition of the American National Standard Z223.1/ NFPA 54 “National Fuel Gas Code” and Standard ANSI/NFPA 70 “National Electric Code.”

In Canada, installation must comply with Standards CAN/CSA-B149.1 or Natural Gas and Propane Installation Code and CSA C22.1, latest edition, Canadian Electric Code, Part I.

In Australia and New Zealand, installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.

WARNING

FOR YOUR SAFETY, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

W033

WARNING

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS:**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Clear the room, building or area of all occupants.**
  - **Immediately call your gas supplier from a neighbor’s phone. Follow the gas supplier’s instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

W052

IMPORTANT: Information must be obtained from a local gas supplier on instructions to be followed if the user smells gas. These instructions must be posted in a prominent location. Step-by-step instructions of the above safety information must be posted in a prominent location near the tumble dryer for customer use.

IMPORTANT: The installer must fully test the tumble dryer after installation and demonstrate to the owner how to operate the machine.

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

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WARNING

- **Installation of unit must be performed by a qualified installer.**
- **Install tumble dryer according to manufacturer's instructions and local codes.**
- **DO NOT install a tumble dryer with flexible plastic venting materials. If flexible metal (foil type) duct is installed, it must be of a specific type identified by the appliance manufacturer as suitable for use with tumble dryer. Refer to section on connecting exhaust system. Flexible venting materials are known to collapse, be easily crushed, and trap lint. These conditions will obstruct tumble dryer airflow and increase the risk of fire.**

W752R1

The following information applies to the state of Massachusetts, USA.

- This appliance can only be installed by a Massachusetts licensed plumber or gas fitter.
- This appliance must be installed with a 36 inch [91 cm] long flexible gas connector.
- A "T-Handle" type gas shut-off valve must be installed in the gas supply line to this appliance.
- This appliance must not be installed in a bedroom or bathroom.

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Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam/Thermal Oil		Electric	
050 Series	CA050L CA050N CK050N CT050L CT050N CU050L CU050N DR50G2-BA050L DR50G2-BA050N DR50G2-BK050N DR50G2-BT050D DR50G2-BT050L DR50G2-BT050N DR50G2-BU050L DR50G2-BU050N	DR55G2-BA050L DR55G2-BA050N DR55G2-BT050D DR55G2-BT050L DR55G2-BT050N DR55G2-BU050L DR55G2-BU050N HA050L HA050N HK050N HT050D HT050L HT050N HU050L HU050N IPD50G2 IT050L IT050N	MT050L MT050N SA050L SA050N SK050N ST050D ST050L ST050N SU050L SU050N UA050L UA050N UK050N UT050L UT050N UU050L UU050N YT050L YT050N YU050L YU050N	CT050S CT050T CU050S CU050T DR50S2-BT050S DR50S2-BT050T DR50S2-BU050S DR50S2-BU050T DR55S2-BT050S DR55S2-BT050T DR55S2-BU050S DR55S2-BU050T HT050S HT050T HU050S HU050T	IPD50S2 IT050S IT050T MT050S MT050T ST050S ST050T SU050S SU050T UT050S UT050T UU050S UU050T YT050S YT050T YU050S YU050T	CT050E CU050E DR50E2-BT050E DR50E2-BU050E DR55E2-BT050E DR55E2-BU050E HT050E HU050E IPD50E2 IT050E MT050E	ST050E SU050E UT050E UU050E YT050E YU050E

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	Gas			Steam/Thermal Oil		Electric	
075 Series	CA075L CA075N CK075N CK075R CT075L CT075N CT075R CU075L CU075N CU075R DR75G2-BA075L DR75G2-BA075N DR75G2-BK075N DR75G2-BK075R DR75G2-BT075D DR75G2-BT075L DR75G2-BT075N DR75G2-BT075R DR75G2-BU075L DR75G2-BU075N DR75G2-BU075R	DR80G2-BA075L DR80G2-BA075N DR80G2-BT075D DR80G2-BT075L DR80G2-BT075N DR80G2-BU075L DR80G2-BU075N HA075L HA075N HK075N HK075R HT075D HT075L HT075N HT075R HU075L HU075N HU075R IPD75G2 IT075L IT075N IT075R MT075L MT075N MT075R	SA075L SA075N SK075N SK075R ST075D ST075L ST075N ST075R STF75L STF75N SU075L SU075N SU075R UA075L UA075N UK075N UK075R UT075L UT075N UT075R UTF75L UTF75N UU075L UU075N UU075R YT075L YT075N YU075L YU075N	CT075S CT075T CU075S CU075T DR75S2-BT075S DR75S2-BT075T DR75S2-BU075S DR75S2-BU075T DR80S2-BT075S DR80S2-BT075T DR80S2-BU075S DR80S2-BU075T HT075S HT075T HU075S HU075T IPD75S2 IT075S IT075T	MT075S MT075T ST075S ST075T SU075S SU075T UT075S UT075T UU075S UU075T YT075S YT075T YU075S YU075T	CT075E CT075F CU075E CU075F DR75E2-BT075E DR75E2-BT075F DR75E2-BU075E DR75E2-BU075F DR80E2-BT075E DR80E2-BU075E HT075E HT075F HU075E HU075F IPD75E2 IT075E IT075F MT075E MT075F ST075E ST075F SU075E SU075F	UB075E UT075E UT075F UU075E UU075F YT075E YU075E

Explanation of digit in 6th position of model number:

D = Liquid Petroleum (L.P.) Gas, Japan
E = Electric
F = Reduced Electric (Eco Line)

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L = L.P. Gas
N = Natural Gas
R = Reduced Gas, Natural Gas (Eco Line)
S = Steam
T = Thermal Oil

Includes models with the following control suffixes:

3B – reversing DX4 vended	KC – single coin	R3 – reversing DX4 OPL
3K – reversing DX4 prep for central pay	KK – reversing prep for central pay	RD – reversing DMP OPL
3L – DX4 prep for central pay	KL – prep for central pay	RE – reversing LED OPL
3O – DX4 OPL	KW – reversing prep for coin	RM – reversing OPL micro
3V – DX4 vended	KX – prep for coin	RQ – reversing dual digital timer
3W – reversing DX4 prep for coin	KY – prep for card	RU – reversing UniLinc OPL
3X – DX4 prep for coin	KZ – reversing prep for card	SD – single drop
BB – reversing basic electronic, coin	LB – reversing network adaptable coin	SX – single drop, prep for coin
BC – basic electronic, coin	LC – network adaptable coin	UO – UniLinc OPL
BG – basic electronic, OPL mode	LK – reversing network adaptable, prep for central pay	WB – reversing network ready coin
BK – reversing basic electronic, prep for central pay	LL – network adaptable, prep for central pay	WC – network ready coin
BL – basic electronic, prep for central pay	LW – reversing network adaptable, prep for coin	WK – reversing network ready, prep for central pay
BW – reversing basic electronic, prep for coin	LX – network adaptable, prep for coin	WL – network ready, prep for central pay
BX – basic electronic, prep for coin	LY – network adaptable, prep for card	WW – reversing network ready, prep for coin
BY – basic electronic, prep for card	LZ – reversing network adaptable, prep for card	WX – network ready, prep for coin
BZ – reversing basic electronic, prep for card	OM – OPL micro	WY – network ready, prep for card
DO – DMP OPL	QT – dual digital timer	WZ – reversing network ready, prep for card
EO – LED OPL		
KB – reversing single coin		

Contact Information

If service is required, contact the nearest Factory Authorized Service Center.

If you are unable to locate an authorized service center or are unsatisfied with the service performed on your unit, contact:

Alliance Laundry Systems
Shepard Street
P.O. Box 990
Ripon, WI 54971-0990
U.S.A.

www.alliancelaundry.com
Phone: +1 (920) 748-3121 Ripon, Wisconsin
+32 56 41 20 54 Wevelgem, Belgium

When calling or writing about your unit, PLEASE GIVE THE MODEL AND SERIAL NUMBERS. The model and serial numbers are located on the serial plate. The serial plate will be in the location shown in *Figure 1* .

Date Purchased _____

Model Number _____

Serial Number _____

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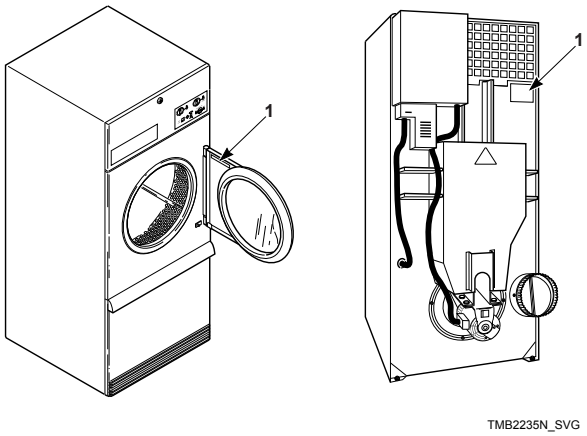
Please include a copy of your bill of sale and any service receipts you have.

If replacement parts are required, contact the source from where you purchased your unit or call +1 (920) 748-3950 or +32 56 41 20 54 for the name and address of the nearest authorized parts distributor.

WARNING

To reduce the risk of serious injury or death, DO NOT repair or replace any part of the unit or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that you understand and have the skills to carry out.

W329



1. Serial Plate

Figure 1

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Safety Information

Explanation of Safety Messages

Precautionary statements (“DANGER,” “WARNING,” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

DANGER

Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.

WARNING

Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.

CAUTION

Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

Important Safety Instructions

WARNING

To reduce the risk of fire, electric shock, serious injury or death to persons when using your tumbler, follow these basic precautions.

W776

Save These Instructions

- Read all instructions before using the tumble dryer.
- Install the tumble dryer according to the INSTALLATION instructions. Refer to the EARTHING (grounding) instructions for the proper earthing (grounding) of the tumble dryer. All connections for electrical power, earthing (grounding) and gas supply must comply with local codes and be made by licensed personnel when required. It is recommended that the machine be installed by qualified technicians.
- Do not install or store the tumble dryer where it will be exposed to water and/or weather. The tumble dryer cannot be used in a closed room where the air supply is insufficient. If necessary, ventilation grids must be installed in the doors or the windows.
- This appliance must not be activated without lint/foam filter.
- When you perceive a gas odor, immediately switch off the gas supply and ventilate the room. Do not switch on electrical appliances and do not pull electrical switches. Do not use matches or lighters. Do not use a phone in the building. Warn the fitter, and if so desired, the gas company, as soon as possible.
- To avoid fire and explosion, keep surrounding areas free of flammable and combustible products. Regularly clean the dryer drum and exhaust tube should be cleaned periodically by competent maintenance personnel. Daily remove piled up dust from filter and inside of filter compartment.
- Do not use or store flammable materials near this appliance.
- Do not dry articles that have been previously cleaned in, washed in, soaked in or spotted with gasoline or machine oils, vegetable or cooking oils, cleaning waxes or chemicals, dry-cleaning solvents, thinner or other flammable or explosive substances as they give off vapors that could ignite, explode or cause fabric to catch on fire by itself.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Items such as foam rubber (latex foam), shower caps, waterproof textiles, rubber backed articles and clothes or pillows filled with foam rubber pads should not be dried in the tumble dryer. Do not use the appliance to dry materials with a low melting temperature (PVC, rubber, etc.).
- Do not tumble fiberglass curtains and draperies unless the label says it can be done. If they are dried, wipe out the cylinder with a damp cloth to remove particles of fiberglass.
- Do not allow children on or in the tumble dryer. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Do not reach into the tumble dryer if the cylinder is revolving.
- Use tumble dryer only for its intended purpose, drying fabrics. Always follow the fabric care instructions supplied by the textile manufacturer and only use the dryer drum to dry textiles that have been washed in water. Only insert spin-dried linen in the dryer.

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- Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
- Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
- Remove laundry immediately after tumble dryer stops.
- DO NOT operate the tumble dryer if it is smoking, grinding or has missing or broken parts or removed guards or panels. DO NOT tamper with the controls or bypass any safety devices.
- Tumble dryer will not operate with the loading door open. DO NOT bypass the door safety switch to permit the tumble dryer to operate with the door open. The tumble dryer will stop tumbling when the door is opened. Do not use the tumble dryer if it does not stop tumbling when the door is opened or starts tumbling without pressing or turning the START mechanism. Remove the tumble dryer from use and call for service.
- Tumble dryer(s) will not operate with lint panel open. DO NOT bypass lint panel safety switch to permit the tumble dryer to operate with the lint panel open.
- Do not modify this appliance.
- Always clean the lint filter daily. Keep area around the exhaust opening and adjacent surrounding area free from the accumulation of lint, dust and dirt. The interior of the tumble dryer and the exhaust duct should be cleaned periodically by qualified service personnel.
- Solvent vapors from dry-cleaning machines create acids when drawn through the heater of the drying unit. These acids are corrosive to the tumble dryer as well as the laundry load being dried. Be sure make-up air is free of solvent vapors.
- At the end of each working day, close off all main supplies of gas, steam and current.
- Do not repair or replace any part of the tumble dryer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out. ALWAYS disconnect and lockout the electrical power to the tumble dryer before servicing. Disconnect power by shutting off appropriate breaker or fuse.
- Before the tumble dryer is removed from service or discarded, remove the door to the drying compartment and the door to the lint compartment.
- Failure to install, maintain, and/or operate this tumble dryer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining, or operating the tumble dryer.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

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Specifications and Dimensions

Specifications and Dimensions

Refer to machine serial plate for additional specifications.

Specifications	050 Series	075 Series		F75
Noise level measured during operation at operator position of 3.3 feet [1 meter] in front of machine and 5.2 feet [1.6 meters] from floor (approximate)	60 dBA	65 dBA		67 dBA
Net Weight (approximate): Pounds [Kilograms]	545 [247]	615 [279]		710 [322]
Standard Packaging Weight: Pounds [Kilograms]	602 [273]	677 [307]		772 [350]
Standard Packaging Shipping Dimensions: Inches [Millimeters]	41.5 x 52.1 x 81 [1054 x 1323 x 2057]	41.5 x 56.4 x 81 [1054 x 1433 x 2057]		41.5 x 56.4 x 81 [1054 x 1433 x 2057]
Slat Crate Packaging Weight: Pounds [Kilograms]	669 [303]	742 [337]		837 [380]
Slat Crate Shipping Dimensions: Inches [Millimeters]	44.5 x 55 x 87.75 [1130 x 1397 x 2229]	44.5 x 59.25 x 87.75 [1130 x 1505 x 2229]		44.5 x 59.25 x 87.75 [1130 x 1505 x 2229]
Cylinder Size: Inches [Millimeters]	37 x 30 [940 x 762]	37 x 36 [940 x 914]		37 x 36 [940 x 914]
Cylinder Capacity (dry weight): Pounds [Kilograms]	50 [22.7]	75 [34]		75 [34]
Air Outlet Diameter: Inches [Millimeters]	8 [203]	8 [203]		10 [254]
Maximum Static Back Pressure: W.C.I. [Millibar, kPa]	0.5 [1.3, 0.13]	0.5 [1.3, 0.13]		0.5 [1.3, 0.13]
Maximum Airflow: C.F.M. [L/sec]	750 [354]	Classic Line Gas/Steam 60 Hz 920 [434] 50 Hz 750 [354] Electric 750 [354]	Eco Line 60 Hz 750 [354] 50 Hz 625 [295]	1100 [519]
Motor: Horsepower [kW]				
Nonreversing	1/2 [0.373]	3/4 [0.560]		Not Applicable

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Specifications	050 Series	075 Series		F75
Reversing Fan	1/3 [0.249]	1/3 [0.249]		1 [0.746]
Reversing Cylinder	1/3 [0.249]	1/3 [0.249]		1/3 [0.249]
Gas Models				
Gas Connection	1/2 in. NPT	1/2 in. NPT		3/4 in. NPT
Gas Burner Rating: Btu/hr. [Mj/hr., kW]	130,000 [137, 38.1]	Classic Line 165,000 [174, 48.359]	Eco Line 60 Hz 130,000 [137.2, 38.1] 50 Hz 110,000 [116.1, 32.2]	225,000 [237, 65.94]
Electric Models				
Heating Element Rating: Kilowatts	21 kW (240 V/50 Hz) 30 kW (other voltages)	Classic Line - 30 kW Eco Line - 21 kW		Not Applicable
Steam Models				
Steam Connection	3/4 in. NPT	3/4 in. NPT		Not Applicable
Steam Coil Rating at 100 psig: Btu/hr. [kg/hr.] (recommended operating pressure 80-100 psig)	177,500 [83.14]	210,300 [98.5]		Not Applicable

NOTE: All machines are shipped with extra nipple to convert to metric thread (from Standard).

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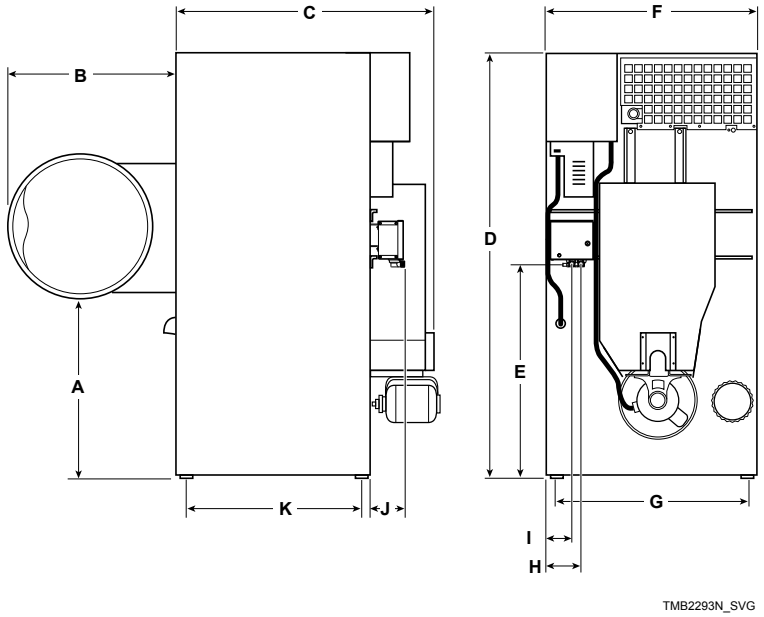
Cabinet Dimensions



Models	A	B	C	D	E*	F
050 Series Gas and Electric	30.75 in. [781 mm]	33.87 in. [860 mm]	48.25 in. [1226 mm]	76.625 in. [1946 mm]	36 in. [914 mm]	38.625 in. [981 mm]
050 Series Steam	30.75 in. [781 mm]	33.87 in. [860 mm]	48.25 in. [1226 mm]	76.625 in. [1946 mm]	36 in. [914 mm]	38.625 in. [981 mm]
075 Series Gas and Electric	30.75 in. [781 mm]	33.87 in. [860 mm]	54.25 in. [1378 mm]	76.625 in. [1946 mm]	36 in. [914 mm]	38.625 in. [981 mm]
075 Series Steam	30.75 in. [781 mm]	33.87 in. [860 mm]	54.25 in. [1378 mm]	76.625 in. [1946 mm]	36 in. [914 mm]	38.625 in. [981 mm]
F75 Gas	30.75 in. [781 mm]	33.87 in. [860 mm]	53 in. [1346 mm]	76.625 in. [1946 mm]	36 in. [914 mm]	38.625 in. [981 mm]

Models	G	H*	I*	J*	K
050 Series Gas and Electric	33 in. [838 mm]	7.1 in. [180 mm]	5.5 in. [140 mm]	6.53 in. [166 mm]	29.5 in. [749 mm]
050 Series Steam	33 in. [838 mm]	7.1 in. [180 mm]	5.5 in. [140 mm]	6.53 in. [166 mm]	29.5 in. [749 mm]
075 Series Gas and Electric	33 in. [838 mm]	7.1 in. [180 mm]	5.5 in. [140 mm]	6.53 in. [166 mm]	35.5 in. [902 mm]
075 Series Steam	33 in. [838 mm]	7.1 in. [180 mm]	5.5 in. [140 mm]	6.53 in. [166 mm]	35.5 in. [902 mm]
F75 Gas	33 in. [838 mm]	7.1 in. [180 mm]	5.5 in. [140 mm]	6.53 in. [166 mm]	35.5 in. [902 mm]

* Fire suppression system optional - may not be on machine.

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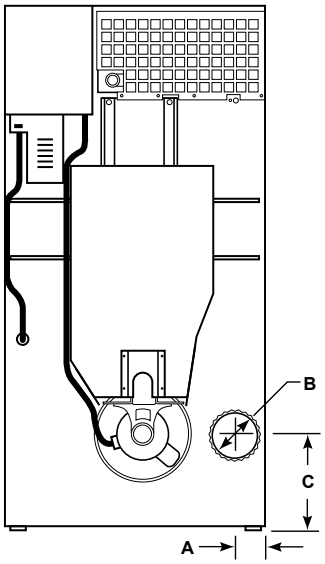
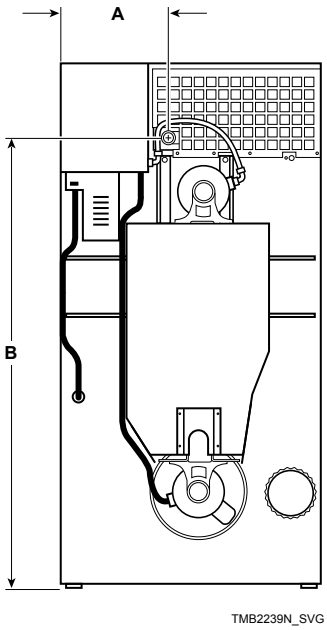
Exhaust Outlet Locations



Models	A	B	C
050/075 Series	5.375 in. [137 mm]	8 in. [203 mm]	13.375 in. [340 mm]
F75	6.5 in. [165 mm]	10 in. [254 mm]	6.5 in. [165 mm]

Gas Connection Locations



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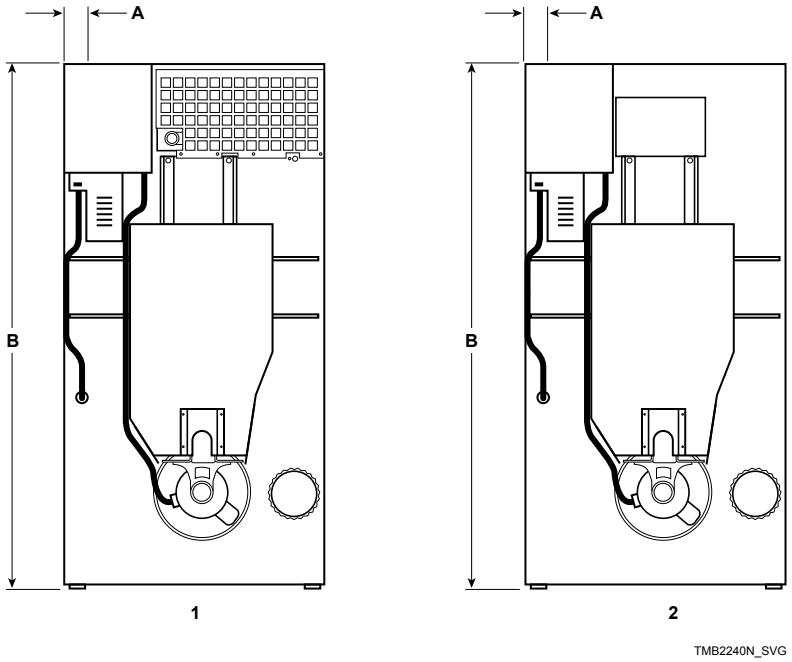
Diameter	A	B
050/075 – 1/2 in. NPT	14.75 in. [375 mm]	65.75 in. [1670 mm]
F75 – 3/4 in. NPT		

Electrical Connection Locations



1. Gas and Steam
2. Electric

A	B
3.25 in. [83 mm]	75.5 in. [1918 mm]

NOTE: These figures are approximate dimensions only.

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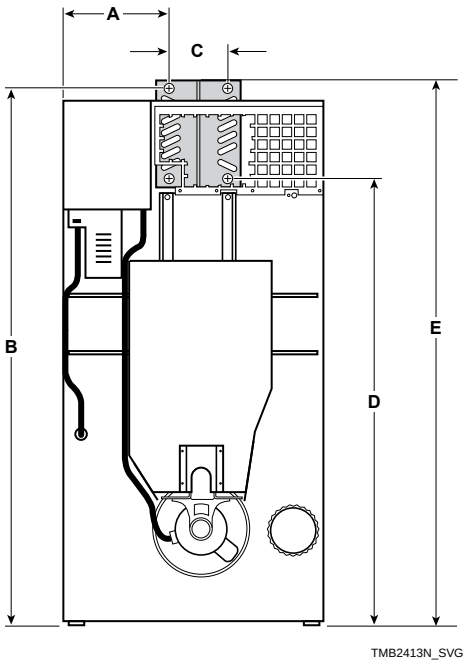
Steam Connection Locations



Diameter	A	B	C	D	E
3/4 in. NPT	15.25 in. [387 mm]	79 in. [2007 mm]	7.5 in. [190 mm]	64.75 in. [1645 mm]	80.25 in. [2038 mm]

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Installation

Pre-Installation Inspection

Upon delivery, visually inspect the crate, carton and parts for any visible shipping damage. If the crate, carton, or cover is damaged or signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

Remove the crate and protective cover as soon as possible and check the items listed on the packing list. Advise the carrier of any damaged or missing articles as soon as possible. A written claim should be filed with the carrier immediately if articles are damaged or missing.

IMPORTANT: Remove the shipping tape from the two back draft dampers located in the exhaust outlet.

IMPORTANT: Warranty is void unless tumble dryer is installed according to instructions in this manual. Installation should comply with minimum specifications and requirements detailed in this manual and applicable local gas fitting regulations, municipal building codes, water supply regulations, electrical wiring regulations, and any other relevant statutory regulations. Due to varied requirements, applicable local codes should be thoroughly understood and all pre-installation work arranged for accordingly.

Materials Required (Obtain Locally)	
All Models	One Single Pole fused disconnect switch or circuit breaker on 1 Phase models. Circuit breaker on 3 Phase models.
Gas Models	One gas shut-off valve for gas service line to each tumble dryer.
Steam Models	One steam shut-off valve for steam service line to be connected upstream of solenoid steam valve. Two steam shut-off valves for each condensate return line. Flexible steam hoses with a 125 psig [pounds per square inch gauge] [8.79 kg/sq. cm] working pressure for connecting steam coils. Refer to *Figure 29* for sizing and connection configurations. Two steam traps for steam coil outlets to condensate return line. Optional – Two vacuum breakers for condensate return lines.

IMPORTANT: 3 Phase Only – Each tumble dryer must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of "single phasing" and causing premature failure of the motor(s).

Location Requirements

The tumble dryer must be installed on a level floor. Floor covering materials such as carpeting or tile should be removed.

To assure compliance, consult local building code requirements. The tumble dryer must not be installed or stored in area where it will be exposed to water and/or weather.

IMPORTANT: DO NOT block the airflow at the rear of the tumble dryer with laundry or other articles. Doing so would prevent adequate air supply to the combustion chamber of the tumble dryer.

A typical tumble dryer enclosure is shown in *Figure 2* .

IMPORTANT: Install tumble dryers with sufficient clearance for servicing and operation, refer to *Figure 2* .

WARNING

To reduce the risk of severe injury, clearance of tumbler cabinet from combustible construction must conform to the minimum clearances, and/or local codes and ordinances.

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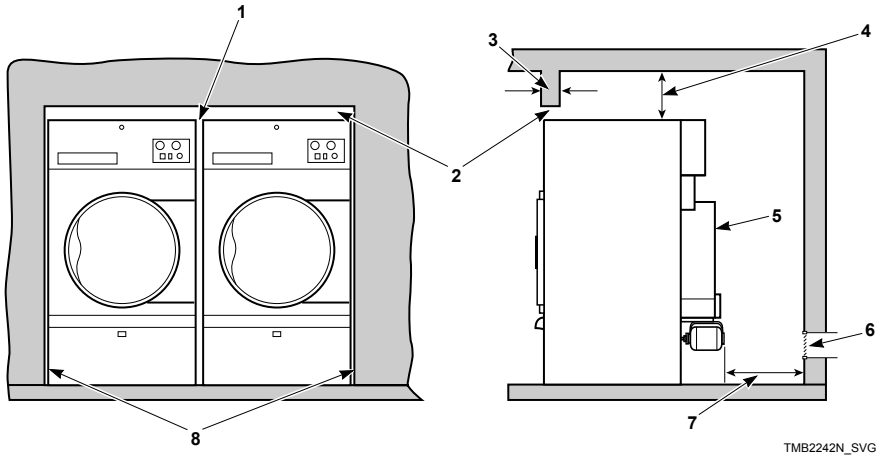

NOTE: Shaded areas indicate adjacent structure.

1. 0.5 in. [13 mm] recommended between machines for removal or installation
2. Allow 2-4 in. [51-102 mm] opening at top of machine to aid in removal or installation. A removable trim piece may be used to conceal the opening; zero clearance allowed for trim.
3. 4 in. [102 mm] maximum header thickness
4. Minimum clearance permitted for remainder: 12 in. [305 mm]
5. Guard
6. Provision for make-up air
7. 24 in. [610 mm] minimum, 36 in. [914 mm] recommended for maintenance purposes
8. 0.25 in. [6 mm] recommended for removal or installation purposes, zero clearance allowed

Figure 2

Position and Level the Tumble Dryer

1. Remove lint panel door, and unscrew the four shipping bolts (one at each corner).
2. Remove tumble dryer from skid.

   NOTE: Do not throw bolts away – they are the leveling legs.
3. Remove four nuts from the literature package, and screw one fully on to each leveling leg.
4. Screw the four leveling legs (bolts) back into the level adjusting fittings from the bottom.
5. Slide tumble dryer to its permanent location. Adjust the leveling legs until the unit is level, or no more than 0.125 inch [3.18 mm] higher in the front. Refer to *Figure 3* . Tumble dryer must not rock. Lock leveling legs with nuts previously installed.

   NOTE: The front of the tumble dryer should be slightly higher than the rear (approximately 0.125 inch [3.18 mm]). This will prevent the clothes, while tumbling, from wearing on the door glass gasket.

   IMPORTANT: Keep tumble dryer as close to floor as possible. The unit must rest firmly on floor so weight of tumble dryer is evenly distributed.

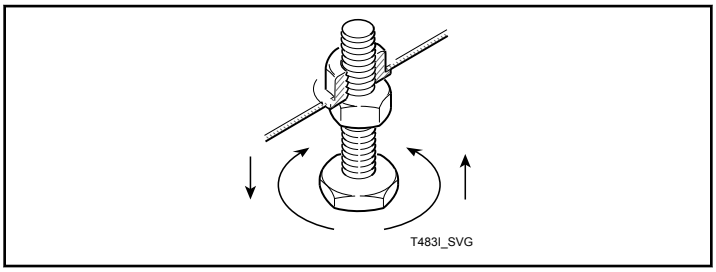

Figure 3

Fire Suppression System (Optional Equipment)

WARNING

Electrical shock can result in death or serious injury. If the water dispensing system is activated, do not attempt to operate the tumble dryer. If the water dispensing system is activated, have the tumble dryer inspected by a qualified agency before operating the tumble dryer.

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Check Local Codes and Permits

Call your local water company or the proper municipal authority for information regarding local codes.

IMPORTANT: It is your responsibility to have ALL plumbing connections made by a qualified professional to assure that the plumbing is adequate and conforms to local, state, and federal regulations or codes.

IMPORTANT: It is the installation or owner's responsibility to see that the necessary or required water, water pressure, pipe size, or connections are provided. Manufacturer assumes no responsibility if the fire suppression system is not connected, installed, or maintained properly.

Water Requirements

IMPORTANT: Water must be supplied to the fire suppression system, or the fire suppression system will not operate as intended.

Connection point to the electric water solenoid valve is a 3/4 inch [19 mm] hose. The fire suppression system equipped tumble dryer must be supplied with a minimum water pipe size of 1/2 inch [12.7 mm] and be provided with a minimum of 20 psi [138 kPa] and a maximum of 120 psi [827 kPa] of pressure at all times. Flowrate must be no less than, but approximately 15 gallons [57 liters] per minute.

NOTE: Water pressure under 20 psi [138 kPa] will cause low flow and water leakage at water solenoid valve.

If the rear of the tumble dryer or the water supply is located in an area where it will be exposed to cold/freezing temperatures, provisions must be made to protect these water lines from freezing.

IMPORTANT: Temperature of the water supply must be kept between 40°F and 120°F [4.4°C and 48.9°C] . If water in the supply line or water solenoid valve freezes, the fire suppression system will not operate.

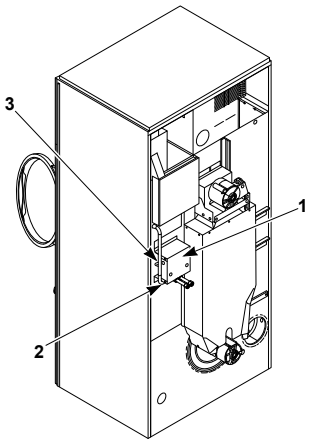
IMPORTANT: If temperature sensors inside the tumble dryer register a temperature below 40F° [4.4°C] , the fire suppression system control will lock out. This feature protects against operation of the tumble dryer with a possible frozen water supply. Only when the temperature sensors register a temperature above 40F° [4.4°C] will the machine reset for operation.

IMPORTANT: Flexible supply line/coupling must be used. Solenoid valve failure due to hard plumbing connections will void the warranty. It is recommended that a filter or strainer be installed in the water supply line.

Water Connections

Connect machine to a backflow preventer (vacuum breaker) before connecting to the public water main in all countries where local regulations require specific water approval certificates.

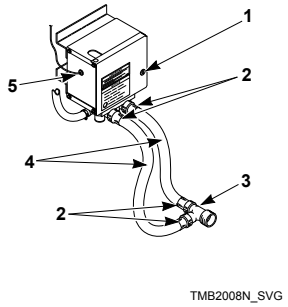
Two hoses and a Y-valve are provided with the tumble dryer to allow for connection of water supply to tumble dryer. The water connections are made to the bushings of the water solenoid valve, located on the rear of the tumble dryer. The Y-valve provides a single female hose connection (Standard US 3/4-11 1/2 NH thread). Refer to *Figure 4* and *Figure 5* .



1. Fire Suppression System Control Box
2. Water Solenoid Valve
3. Opening for Auxiliary Alarm Cable

Figure 4

To connect the two hoses (supplied with tumble dryer), insert rubber washers (from literature pack) in water inlet hose couplings. Refer to *Figure 5* .



1. Lock
2. Hose Couplings
3. Y Valve
4. Inlet Hoses
5. Opening for Auxiliary Alarm Cable

Figure 5

Connect inlet hoses to water supply. Flush the lines for approximately two minutes to remove any foreign materials that could clog the screens in the water mixing valve. This is especially important when installing a tumble dryer in a newly constructed or renovated building. Then connect the hoses to the Y-valve; con-

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nect the Y-valve to the connections at the rear of the tumble dryer.

IMPORTANT: Thread hose couplings onto valve connections finger tight, then turn 1/4 turn with pliers. Do not cross thread or overtighten couplings.

IMPORTANT: Hoses and other natural rubber parts deteriorate after extended use. Hoses may develop cracks, blisters or material wear from the temperature and constant high pressure they are subjected to. All hoses should be checked on a yearly basis for any visible signs of deterioration. Any hose showing the signs of deterioration listed above should be replaced immediately. All hoses should be replaced every five years.

NOTE: Longer inlet hoses are available (as optional equipment at extra cost) if the hoses supplied with the tumble dryer are not long enough for installation. Order hoses as follows:

Part No. 20617 Inlet hose 8 feet [2.44 m]

Part No. 20618 Inlet hose 10 feet [3.05 m]

NOTE: Replacement outlet hoses are available (at extra cost). Order 44073301 Hose, 39 in. [99 cm].

Electrical Requirements

WARNING

Electrical power must be provided to tumbler at all times. The fire suppression system will be inoperative if the main electrical power supply is disconnected.

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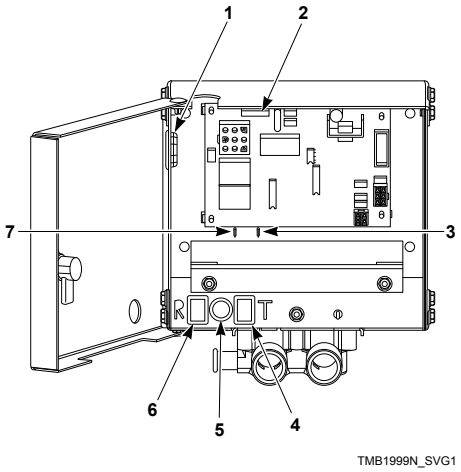
No independent external power source or supply connection is necessary. Power to operate the 24 Volt fire suppression system is from the rear junction/contactor box.

Auxiliary Alarm

The fire suppression system provides an auxiliary output signal when the system is activated. During tumble dryer installation, you have the option to connect a separate alarm system to this auxiliary output. Potential uses of the auxiliary output include, but are not limited to: (1) sounds an alarm, (2) activates a building sprinkler system, (3) notifies a fire department, etc. Use of the auxiliary output is not required for the fire suppression system to operate, but may be used for additional protection.

The connection to the auxiliary output is made through the FS-1 and FS-2 fast-on connections inside the fire suppression control box. Refer to *Figure 6* . The relay is rated for 24 VAC, 5.2 Amp, sealed current.

NOTE: The auxiliary output is activated during fire suppression system maintenance test sequence. Consider this fact prior to your system test every three months. (Example: If the external system uses the auxiliary output to call the fire department, inform the fire department before and after the fire suppression system maintenance test.)



1. Opening for Auxiliary Alarm Cable
2. Fuse
3. Auxiliary Alarm Fast-On Connection
4. Test Button
5. Light
6. Reset Button
7. Auxiliary Alarm Fast-On Connection

Figure 6

Bolt-On Angle Option

050 Series Tumble Dryers Only

This option allows the tumble dryer depth to be reduced to 34 5/16 inches [871 mm]. The tumble dryer should then fit through a 36 inch [914 mm] door opening (actual 34.5 inches [876 mm]).

1. Remove the loading door, access panel, front panel and lint panel. Refer to *Figure 7* .

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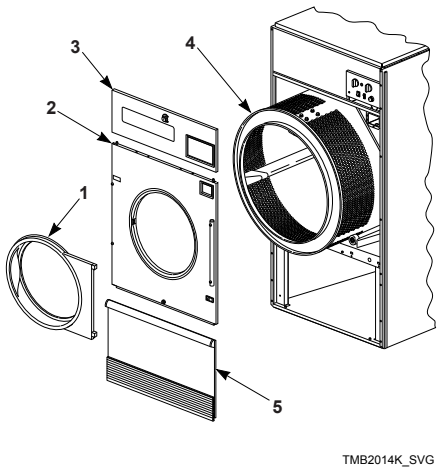
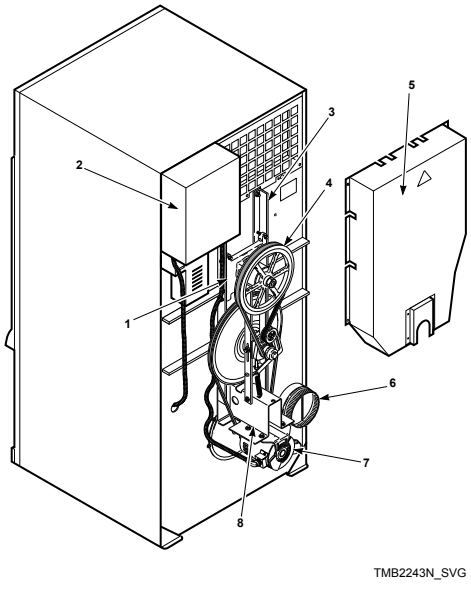


1. Loading Door
2. Front Panel
3. Access Panel
4. Cylinder
5. Lint Panel

Figure 7

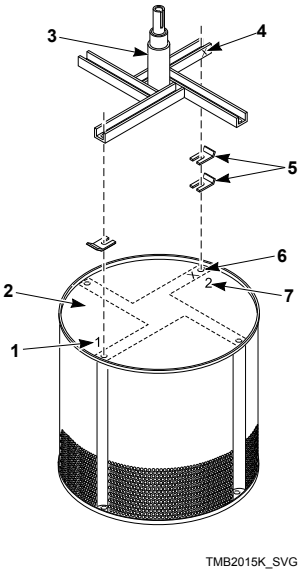
2. Remove the drive guard. Refer to *Figure 8* .



1. Trunnion Housing
2. Junction/Contactor Box
3. Vertical Trunnion Channel
4. Cylinder Pulley
5. Drive Guard
6. Exhaust Thimble
7. Motor
8. Motor Bracket

Figure 8

3. Remove the drive belts. Refer to *Figure 8* .
4. Remove the cylinder pulley and shaft key.
5. Pull the cylinder out through the front of the tumble dryer. Refer to *Figure 7* .
6. To ensure proper cylinder balance for reassembly, mark each channel's original location on cylinder head and number of shims for each channel before removal. Refer to *Figure 9* .
7. Remove the complete idler assembly.
8. Remove the trunnion housing. Refer to *Figure 8* .
9. Disconnect the motor harness(es).



1. Number of Shims for this Channel
2. Cylinder Head
3. Trunnion
4. Channel Identifier
5. Shims
6. Channel Location
7. Number of Shims for this Channel

Figure 9

10. Remove the motor(s) and motor bracket(s). Refer to *Figure 8* .
11. Unbolt and remove the two vertical trunnion channels.
12. Remove the junction/contactor box. Refer to *Figure 8* .
13. Remove the exhaust thimble.
14. The gas supply line may require removal if it extends past the rear panel. If so, disconnect the union located between the gas and shutoff valves and remove the assembly out through the front of the tumble dryer.
15. Remove the tumble dryer from the crate base and slide it through the door, sideways.
16. Refer to the appropriate service video, installation manual and wiring diagram to reassemble and install the tumble dryer correctly.

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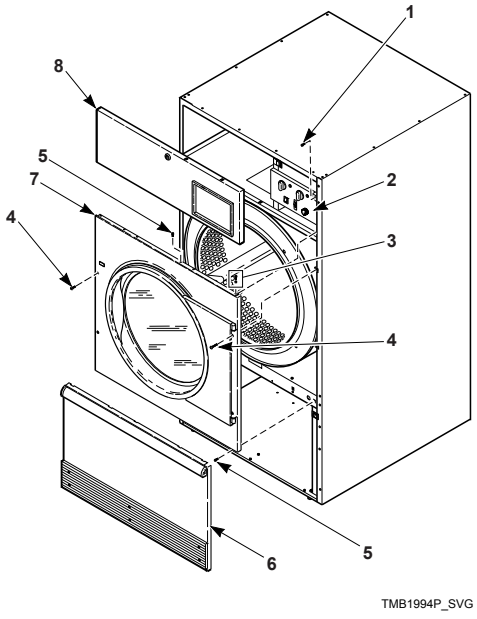
To Reverse the Loading Door

1. Disconnect power supply to tumble dryer.
2. Unlock and remove control panel. Remove two control assembly mounting screws from right side. Swing open control to access upper flange right guide lug assembly. Refer to *Figure 10* .
3. Remove lint panel.

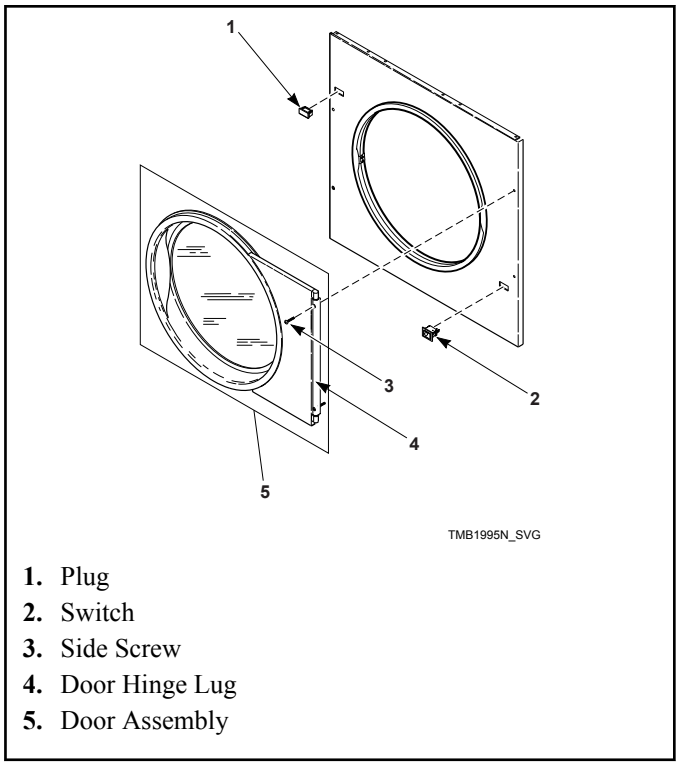
   IMPORTANT: Support door and hinge assembly securely to prevent it from dropping once side screws are removed from door hinge lug.



1. Control Assembly Mounting Screw
2. Control Assembly
3. Guide Lug Assembly
4. Side Screw
5. Screw
6. Lint Panel
7. Front Panel
8. Control Panel

Figure 10

4. Remove four front panel screws. Refer to *Figure 10* . Keep door hinge cams in place on door hinge lug. Pull lug and door assembly off as one piece. Refer to *Figure 11* .
5. Remove remaining front panel screws. Refer to *Figure 10* . Disconnect door switch harness from switch. Take off front panel. Refer to *Figure 11* .
6. Exchange switch and plug locations. Depress tabs with an adjustable pliers to remove plug and switch from front panel. Reinstall switch, orienting button toward center of machine. Reinstall plug in switch's previous location. Refer to *Figure 11* .



1. Plug
2. Switch
3. Side Screw
4. Door Hinge Lug
5. Door Assembly

Figure 11

7. Cut wire ties to remove door switch harness bundle. Be careful not to damage harness wires. Refer to *Figure 12* .
8. Reroute door switch harness up through the hole in the right side of the top panel. Use the panel cutout opening to then put harness down through the hole in the left side of the top panel and into the upper left corner of the cylinder enclosure.

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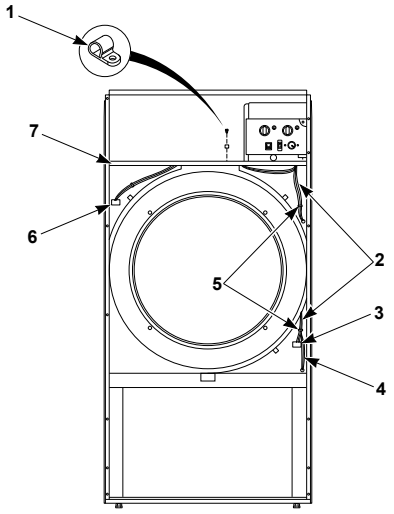
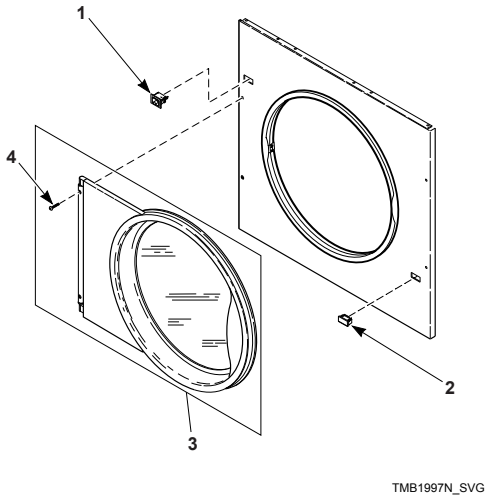


1. Screw Cable Clamp
2. Beginning Location of Door Switch Harness
3. Original Switch Location
4. Lint Panel Switch Harness
5. Wire Ties
6. Original Plug Location
7. Top Panel

Figure 12

9. Place front panel on machine, loosely attach four bottom screws. Connect door switch harness to switch in new location. Install door assembly and four front panel side screws loosely. Refer to *Figure 13* .
10. Check lint panel fit, adjusting front panel up or down as required. Tighten four front panel side screws to maintain position of front panel for proper lint panel clearance.
11. Remove lint panel. Fully tighten bottom screws on front panel.
12. Reinstall top screws and guide lugs.
13. Adjust door catch if necessary to allow 7 – 15 pounds [0.48 – 1.03 bar] pull at center of handle.
14. Reinstall control assembly using mounting screws.
15. Reinstall control panel and lint panel.

IMPORTANT: Restore power to tumble dryer and test for proper operation of loading door switch. Tumble dryer should not start with door open; an operating tumble dryer should stop when door is opened.



1. Switch (New location)
2. Plug (New location)
3. Door Assembly
4. Side Screw

Figure 13

NOTE: If machine is converted back to right hand hinge operation, the door switch harness must be rerouted.

Before Placing Tumble Dryer into Service

1. Remove or open all panels and check accessible bolts, nuts, screws, terminals and fittings for tightness.
2. Check belt tension and adjust if necessary. Refer to Adjustments section.
3. Replace all panels and guards.
4. Turn on electrical supply to tumble dryer.
5. Open the supply valve for gas or steam heated tumble dryers.
6. After performing the previous checks, start the tumble dryer by pressing START. (Refer to the Operating section for detailed instructions.) Release the start button and open the loading door. The cylinder should stop rotating within seven seconds after the door is opened a maximum of 2 inches [51 mm]. If it does not, adjust the loading door switch. Refer to Adjustments section.
7. **Gas Tumble Dryers:** Start the tumble dryer and check the burner flame. Adjust the air inlet shutter as required. Refer to Adjustments section.

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IMPORTANT: The electronic ignition system will attempt to light the gas by sparking for the "trial for ignition" period. If gas does not ignite within this period, the ignition control will go into a safety lockout and the valve will no longer open until the control is reset. It may be necessary to retry several times to bleed air from the gas lines. To reset, open and close the loading door and restart tumble dryer. If lockout condition persists, check that the manual gas shut-off valve is in the ON position and that the gas service is properly connected. If condition still persists, remove tumble dryer from service.

8. Load the cylinder with a full load of clean rags and run to remove oil or dirt from cylinder.
9. Check the airflow switch operation by opening the lint panel; be sure to remove shipping tape from airflow switch prior to operation. Temporarily tape down the lint panel safety switch located behind the upper left corner of the lint panel. The heating systems should shut off when the lint panel is opened a maximum of 1.5 inches [38 mm].

The airflow switch operation may be affected by shipping tape still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked. If there is a problem, contact an authorized service person.

WARNING

Do not operate tumble dryer if airflow switch is faulty. An explosive gas mixture could collect in tumble dryer if airflow switch does not operate properly.

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10. Wipe out the cylinder using an all-purpose cleaner or detergent and water solution. Refer to *Figure 14* .

IMPORTANT: The use of chlorine bleach for removing any discoloration should be avoided because bleach could damage the finish.

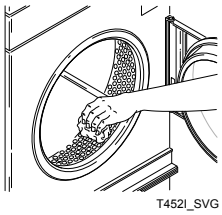

Figure 14

Models		Prepurge Time (seconds)	Trial for Ignition (seconds)	Reset Lockout Condition By:
Models through 3/10/13	CE and Australia	18	10	025, 030, 035, 055: Press reset button on rear of machine T30, T45: Press lighted reset button in rear contactor box
	All others	1-3	10	Open loading door
Models starting 3/11/13 through 12/31/13	CE	1	10 (attempts to ignite 3 times)	For models with EO, RE, RU or UO control suffixes: Press start on control keypad. For models with all other control suffixes: Press and hold reset button on junction box until light goes out.
Models Starting 3/11/13	Non-CE and non-Australian	1	10 (attempts to ignite 3 times)	Open loading door

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Models		Prepurge Time (seconds)	Trial for Ignition (seconds)	Reset Lockout Condition By:
Models starting 3/11/13 through 7/31/13	Australia	18	10	025, 030, 035, 055: Press reset button on rear of machine T30, T45: Press lighted reset button in rear contactor box
Models starting 8/1/13	Australia	23	23	For models with EO, RE, RU or UO control suffixes: Press start on control keypad. For models with all other control suffixes: Press and hold ignition control reset button.
Models Starting 1/1/14	CE			

If the tumble dryer does not meet ANY of the listed requirements, remove tumble dryer from use. Refer to Removing Tumble Dryer from Service section.

Required for CE Models Only

Once machine is installed, please be sure to complete the following items:

- Review and verify machine operation with customer.
- Leave all literature and a signed Declaration of Conformity with customer.
- Review machine warranty information with customer.
- Apply warning sticker on front panel of machine, in language appropriate to country of sale (included in literature packet).

Installing CE Gas Drying Tumble Dryer

General Information

This information is to be used when installing gas tumble dryers in countries and/or on gases different than the machine's factory configuration. Tumble Dryers are supplied from the factory for operation on Natural Gas 1000 Btu/cu. ft. [8914 kcal/m ^{3}], or L.P. Gas 2500 Btu/cu. ft. [22,250 kcal/m ^{3}], with natural gas group H/E, designation G20 and L.P. gas group B/P, designation G30. To install machines in any other country, or on any other gas, requires some level of modification.

Machines are built in two different configurations:

- Natural Gas – regulated/governor
- Liquefied Petroleum (L.P.) Gas – not regulated/no governor

For converting models from Natural Gas to L.P. Gas:

050 series	M4544P3
075 series	M4545P3

Serial plates supplied from the factory are configured for GB/IE/PT/ES/IT/GR/LU/CH/BE. These instructions pertain to the situations when the country of use or gas supply is different than that on the serial plate. If applicable, peel off the appropriate country sticker (included with machine) and apply it to the serial plate over the existing country information.

These instructions are only valid if the following country code is on the appliance: GB/IE/PT/ES/IT/GR/LU/CH/BE. If this code is not present on the appliance, it is necessary to refer to the technical instructions which will provide the necessary information concerning the modification of the appliance to the condition of use for the country.

Before installation, check that the local distribution conditions, nature of gas and pressure, and the adjustment of the appliance are compatible.

Table 1 describes the different gases that are available in different CE countries, and how the machines need to be configured to operate with those gases. In the CE, there are Natural Gas configurations that do not allow for machine regulation and L.P. Gas configurations that must be regulated. For L.P. Gas, third family B/P at 50 mbar [5 kPa], order Regulated Natural Gas machines and convert according to *Table 1* .

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CE Orifices

Gas Type	Gas Family	Group	Gas Designation	Supply Pressure in. wc [mbar, kPa]	Manifold Pressure in. wc [mbar, kPa]	Capacity/Model	Orifice Diameter inch [mm]	Orifice Part Number	Quantity
Natural Gas	Second	$I_{2H(E)}$	G20	8/10 [20/25, 2/2.5]	3.57 [8.9, 0.89]	50	0.1200 [3.0]	M401017	2
						75	0.1160 [2.9]	M401022	3
		I_{2L}	G25	10 [25, 2.5]	5.06 [12.6, 1.26]	50	0.1440 [3.7]	M400998	2
						75	0.1405 [3.6]	M401014	3
		I_{2E+}	G20	8 [20, 2.0]	Unregulated	50	0.1440 [3.7]	M400998	2
						75	0.1405 [3.6]	M401014	3
LP	Third	$I_{3B/P}$	G30	11.25/12 [28/30, 2.8/3.0]	Unregulated	50	0.0820 [2.1]	M401027	2
						75	0.0785 [2.0]	M400999	3
			G30	14.9/20 [37/50, 3.7/5.0]	12.05 [30, 3.0]	50	0.0820 [2.1]	M401027	2
						75	0.0785 [2.0]	M400999	3
		$I_{3+/3P}$	G30 / G31	11.25/14.9 [28/37, 2.8/3.7]	Unregulated	50	0.0820 [2.1]	M401027	2
						75	0.0785 [2.0]	M400999	3

Table 1

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Properties of CE Gases

Gas Type	Gas Family	Group	Gas Description	Gas Designation	Wi Wobbe Index (net) Btu/ft^3 [MJ/m^3]	Hi Heating Value (net) Btu/ft^3 [MJ/m^3]	Ws Wobbe Index (gross) Btu/ft^3 [MJ/m^3]	Hs Heating Value (gross) Btu/ft^3 [MJ/m^3]	d Density
Natural Gas	Second	$I_{2H,E}$	Not Applicable	G20	1226 [45.67]	913 [34.02]	1362 [50.72]	1014 [37.78]	0.555
		I_{2E+}	2H						
		I_{2L}	Not Applicable	G25	1004 [37.38]	785 [29.25]	1115 [41.52]	872 [32.49]	0.612
		I_{2E+}	2L						
LP	Third	$I_{3B/P}$	Not Applicable	G30	2164 [80.58]	3117 [116.09]	2345 [87.33]	3378 [125.81]	2.075
		I_{3+}	Pure Butane						
		I_{3+}	Pure Propane	G31	1898 [70.69]	2363 [88]	2063 [76.83]	2568 [95.65]	1.55
		I_{3P}	LPG with Propane						

Table 2

Changing Gas Configuration

1. Determine the necessary conversion operations to convert from the factory-supplied configuration to the desired configuration.
2. Perform the conversions required so the machine is properly configured for the desired country and gas. Refer to the following sections:
   - How to Convert Gas Valve from Regulated to Unregulated
   - How to Change Burner Orifice Size
   - How to Adjust Gas Valve Governor/Regulator

WARNING

When converting the tumble dryer to a different gas or pressure, first verify that the supply inlet pressure is equipped with a pressure regulator (located ahead of the tumble dryer) that will maintain the gas supply at the inlet pressure specified.

W430R1

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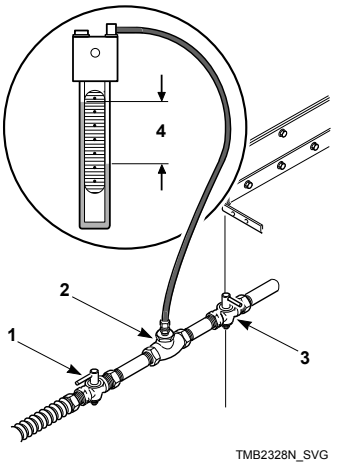

1. Gas Shut-Off Valve (Ahead of pressure tap) (Not Supplied)
2. Pressure Tap
3. Gas Shut-Off Valve (Shown in closed position) (Not Supplied)
4. Specified Local Inlet Pressure

Figure 15

How to Change Burner Orifice Size

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 15* .
2. Remove spud holder. Unscrew spud holder nut near gas valve. Remove the burner orifice(s) from spud holder. Refer to *Figure 16* .
3. Install the new, correct burner orifice(s). Refer to *Figure 17* and *Table 1* . Torque each to 9 – 10 Nm.
4. Reinstall spud holder assembly to gas valve, making certain burner orifice(s) are in line with burner tube opening. Refer to *Figure 17* .
5. Commission tumble dryer for use.

   NOTE: Blank burner orifices are Part No. M400995.

Specific Conversion Procedures

How to Convert Gas Valve from Regulated to Unregulated

NOTE: Conversion from regulated to unregulated is only needed when regulated tumble dryers were ordered, but unregulated tumble dryers were needed.

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 15* .
2. Follow instructions in Conversion Kit, Part No. M400763.

   NOTE: These kits do not contain any burner orifices.
3. Replace burner orifice(s) as per *Table 1*
4. If applicable, peel off the appropriate conversion sticker (included with machine) and apply it to the serial plate over the "ADJUSTED FOR _____ GAS: _____" information.
5. Commission tumble dryer for use.

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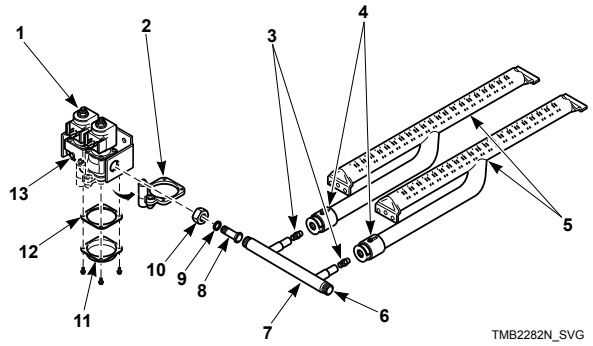


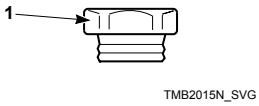
1. Gas Valve
2. Regulator Plate
3. Burner Orifice
4. Burner Tube Openings
5. Burner
6. Pressure Tap
7. Spud Holder
8. Manifold Pipe
9. Anti-Torque Ring
10. Spud Holder Nut
11. Plate
12. Gasket
13. Regulator Cap

Figure 16

How to Adjust Gas Valve Governor/Regulator

1. Check gas burner orifice (manifold) pressure as follows. Refer to *Figure 16* .
2. Remove screw plug from pressure tap.
3. Connect a “U”-tube manometer (or similar pressure gauge) to the burner orifice (manifold) pressure tap.
4. Start tumble dryer and note pressure once flame is burning. Remove regulator cap and adjust regulator screw until the burner orifice pressure per applicable table is achieved. Replace regulator cap. Refer to *Figure 16* .
5. Commission tumble dryer for use.

Burner Orifice



1. Size Stamped on Orifice

Figure 17

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Exhaust Requirements

Exhaust Requirements

WARNING

A drying tumble dryer produces combustible lint. To reduce the risk of fire, the tumble dryer must be exhausted to the outdoors.

W057R1

WARNING

To reduce the risk of fire, DO NOT use plastic or thin foil ducting to exhaust the tumbler.

W773

WARNING

To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust tumble dryer air into a window well, gas vent, chimney or enclosed, unventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building.

W059R1

Layout

Whenever possible, install tumble dryers along an outside wall where duct length can be kept to a minimum, and make-up air can be easily accessed. Construction must not block the airflow at the rear of the tumble dryer. Doing so would prevent adequate air supply to the tumble dryer combustion chamber.

Make-Up Air

A tumble dryer is forced air exhausted and requires provisions for make-up air to replace air exhausted by tumble dryer.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.

Required Make-Up Air Opening (to the outside) for Each Tumble Dryer	
Model	Opening
050 Series	144 in.^{2} [92,903 mm^2]
075 Series	195 in.^{2} [125,806 mm^2]
F75 Series	250 in.^{2} [161,290 mm^2]

Make-up air openings with louvers will restrict airflow. The opening must be increased to compensate for area taken up by louvers.

Make-up air openings in rooms containing tumble dryer(s) and/or gas fired hot water heater or other gravity vented appliances must be increased sufficiently to prevent downdrafts in any of the vents when all tumble dryers are in operation. Do not locate gravity vented appliances between tumble dryer(s) and make-up air openings. If it is necessary to duct make-up air to tumble dryer(s), increase area of duct work by 25% to compensate for restrictions in air movement.

Venting

WARNING

To reduce the risk of fire due to increased static pressure, we do not recommend installation of in-line secondary lint filters or lint collectors. If secondary systems are mandated, frequently clean the system to assure safe operation.

W749

IMPORTANT: Installing in-line filters or lint collectors will cause increased static pressure. Failure to maintain the secondary lint system will decrease tumble dryer efficiency and may void machine warranty.

For maximum efficiency and minimum lint accumulation, tumble dryer air must be exhausted to the outdoors by the shortest possible route.

Proper sized exhaust ducts are essential for proper operation. All elbows should be sweep type. Exhaust ducts must be assembled so the interior surfaces are smooth, so the joints do not permit the accumulation of lint. DO NOT use plastic, thin foil or Type B flexible ducts - rigid metal ducts are recommended. Use exhaust ducts made of sheet metal or other noncombustible material. DO NOT use sheet metal screws or fasteners on exhaust pipe joints which extend into the duct and catch lint. Use of duct tape or pop-rivets on all seams and joints is recommended, if allowed by local codes.

Verify that old ducts are thoroughly cleaned out before installing new tumble dryer(s).

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WARNING

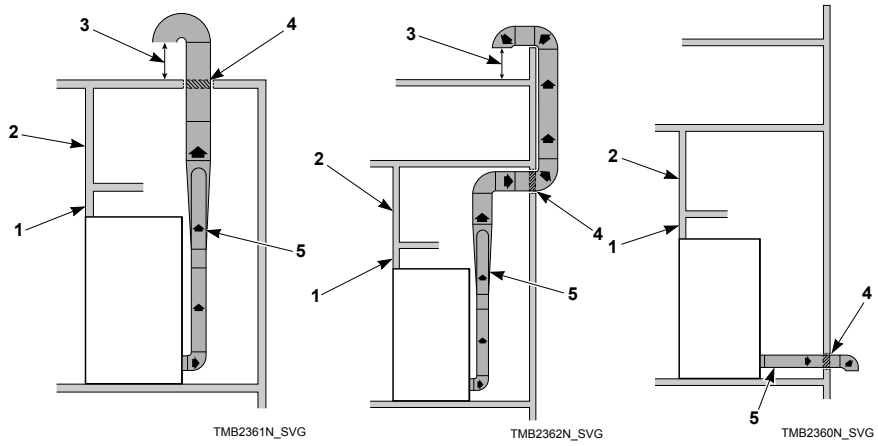
Improperly sized or assembled ductwork causes excess back pressure which results in slow drying, lint collecting in the duct, lint blowing back into the room, and increased fire hazard.

W355

NOTE: Exhaust ducts must be constructed of sheet metal or other noncombustible material. Such ducts must be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0.0195 inches [0.495 mm] thick.

Where the exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes. The space around the duct may be sealed with noncombustible material. Refer to *Figure 18* .

IMPORTANT: For best performance provide an individual exhaust duct for each tumble dryer. Do not install a hot water heater in a room containing tumble dryers. It is better to have the water heater in a separate room with a separate air inlet.



1. Removable strip of panel in framing wall to permit removal of tumble dryer from framing wall
2. Partition or bulkhead
3. Minimum distance between exhaust opening and roof, ground or other obstruction: 36 in. [914 mm]
4. 2 in. [51 mm] minimum clearance on both sides of duct
5. Exhaust airflow – maximum length of rigid duct 14 ft. [4.3 m] or 7.87 ft. [2.4 m] of flexible metal duct

Figure 18

NOTE: Do not install wire mesh or screen in exhaust duct opening to avoid lint build-up or impacting proper discharge of air from tumble dryers.

NOTE: Where exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes.

NOTE: Inside of duct must be smooth. Do not use sheet metal screws to join sections.

Consult your local building code for regulations which may also apply.

Individual Venting

For maximum efficiency and performance, it is preferred to exhaust tumble dryer(s) individually to the outdoors.

IMPORTANT: At no point may the cross sectional area of installed venting be less than the cross sectional area of the exhaust outlet of the tumble dryer.

The exhaust duct must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified on the installation sticker on the rear of the tumble dryer.

NOTE: Static back pressure must be measured with the tumble dryer running.

The maximum allowable length venting is 14 feet [4.3 m] and two 90° elbows or equivalent. If the equivalent length of a duct required for an installation exceeds the maximum allowable equivalent length, the diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m] . Cross section area of a rectangular duct must be increased by 20% for each additional

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20 feet [6.1 m] . Refer to *Table 3* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
8 in. [203 mm]	One 90° elbow = 9.3 ft. [2.83 m]
10 in. [254 mm]	One 90° elbow = 11.6 ft. [3.5 m]
12 in. [305 mm]	One 90° elbow = 14 ft. [4.3 m]
14 in. [356 mm]	One 90° elbow = 16 ft. [4.9 m]
16 in. [406 mm]	One 90° elbow = 18.7 ft. [5.7 m]
18 in. [457 mm]	One 90° elbow = 21 ft. [6.4 m]
Equivalent Length (meter) = 1.17 x Duct Diameter (mm)	

Table 3

Example: A 12 inch [305 mm] diameter duct's equivalent length of 14 feet [4.3 m] of duct and two 90° elbows is:

Equivalent Length

= 14 ft. [4.3 m] + (2) 90° elbows

= 14 ft. [4.3 m] + 14 ft. [4.3 m] + 14 ft. [4.3 m]

= 42 ft. [12.8 m]

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] per minute cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

NOTE: The maximum length of a flexible metal duct must not exceed 7.87 ft. [2.4 m] as required to meet UL2158, clause 7.3.2A.

Manifold Venting

While it is preferable to exhaust tumble dryers individually to the outdoors, a main collector duct may be used if it is sized according to *Figure 20* and *Figure 21* . This illustration indicates minimum diameters, and should be increased if the collector length exceeds 14 feet [4.3 m] and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross sectional area of a rectangular or square duct must be increased 20% for each additional 20 feet [6.1 m]. Refer to *Table 4* to determine equivalent ducting sizing. The collector duct may be rectangular or square in cross section, as long as the area is not reduced. Provisions MUST be made for lint removal and cleaning of the collector duct.

The vent collector system must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure of 0.5 W.C.I. [1.3 bar] as specified on the installation sticker on the rear of tumble dryer. Static back pressure must be measured with all tumble dryers vented into the collector operating.

NOTE: Never connect a tumble dryer duct at a 90° angle to the collector duct. Refer to *Figure 19* . Doing so will cause excessive back pressure, resulting in poor performance. Never connect two tumble dryer exhaust ducts directly across from each other at the point of entry to the collector duct.

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

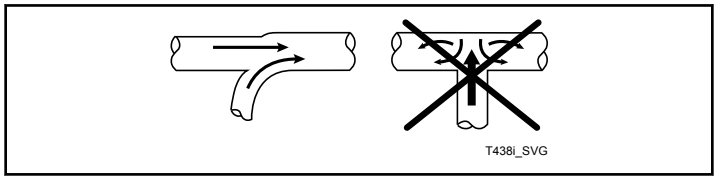

Figure 19

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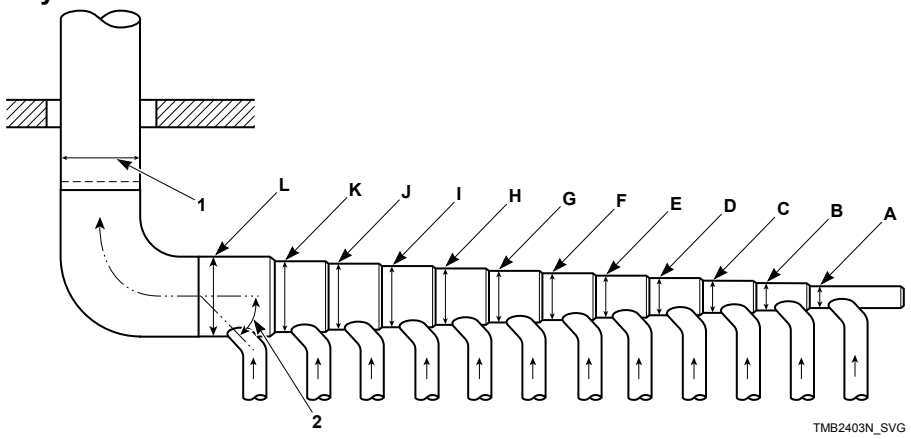
One Manifold Assembly



1. Outlet duct diameter = largest duct diameter based on number of units
2. 45° typical

Figure 20

Duct Station	050/075	F75
A	8 in. [203 mm]	10 in. [254 mm]
B	12 in. [305 mm]	15 in. [381 mm]
C	15 in. [381 mm]	18 in. [457 mm]
D	17 in. [432 mm]	21 in. [533 mm]
E	19 in. [483 mm]	24 in. [610 mm]
F	21 in. [533 mm]	26 in. [660 mm]
G	23 in. [584 mm]	28 in. [711 mm]
H	25 in. [635 mm]	30 in. [762 mm]
I	26 in. [660 mm]	32 in. [813 mm]
J	27 in. [686 mm]	33 in. [838 mm]
K	29 in. [737 mm]	35 in. [889 mm]
L	30 in. [762 mm]	36 in. [914 mm]

Table 4

NOTE: *Table 4* represents units with the same vent size. If multiple vent sizes are used, consult a local HVAC specialist.

NOTE: Duct clean-out recommended every 6 feet [183 cm].

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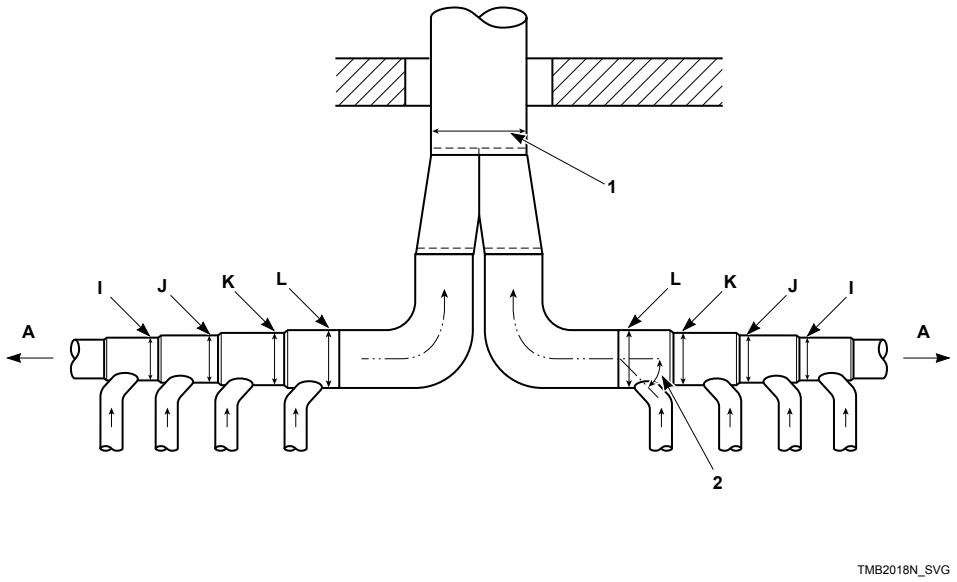
Two Manifold Assemblies



1. Outlet duct diameter = combined largest duct diameter of both sides
2. 45° typical

Figure 21

Refer to *Table 4* for measurements for each manifold.

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Gas Requirements

Gas Requirements

WARNING

To reduce the risk of fire or explosion, DO NOT CONNECT THE GAS LINE TO THE TUMBLE DRYER IF THE GAS SERVICE IS NOT THE SAME AS THAT SPECIFIED ON THE TUMBLE DRYER SERIAL PLATE! It will first be necessary to convert the gas burner orifice and gas valve. Appropriate conversion kits are available.

W060R1

WARNING

To reduce the risk of gas leaks, fire or explosion, use a new flexible stainless steel connector.

W774

IMPORTANT: Any product revisions or conversions must be made by the Manufacturer's Authorized Dealers, Distributors or local service personnel.

IMPORTANT: The tumble dryer must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 0.5 psig [3.45 kPa, 34.5 mbar].

NOTE: For gas valves with a manual shut-off switch on the gas valve, the shut-off switch does not protect the valve from this pressure test. Use the individual manual shut-off valve from the gas supply piping system to protect the gas valve.

IMPORTANT: The tumble dryer and its manually operated appliance gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 0.5 psig [3.45 kPa, 34.5 mbar].

IMPORTANT: The installation must comply with local codes or, in the absence of local codes:

- **with the latest edition of the "National Fuel Gas Code," ANSI Z223.1/NFPA 54 in the U.S.A.**
- **with CAN/CSA-B149.1 Natural Gas and Propane Installation Code in Canada**
- **In Australia and New Zealand , installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.**

Obtain specific gas service pipe size from the gas supplier. Refer to *Table 5* for general pipe size.

The following must be furnished and installed by the customer for the gas service line to each tumble dryer. Refer to *Figure 22* .

- Sediment traps
- Shut-off valves
- Supply pressure taps

It is important that equal pressure be maintained at all tumble dryer gas connections. This can be done by installing a 1 inch [25.4 mm] pipe gas loop to maintain equal pressure at all gas connections. Refer to *Figure 23* .

WARNING

To reduce the risk of fire or explosion, if the tumble dryer is to be connected to Liquefied Petroleum (L.P.) gas, a vent to the outdoors must be provided in the room where the tumble dryer is installed.

W062R1

NATURAL GAS pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

	Non-CE and Non-Australian Models	Australian and Korean Models	CE Models
Maximum	10.5 in. w.c.	2.61 kPa	26.1 mbar
Recommended	6.5 in. w.c	1.62 kPa	16.2 mbar
Minimum	5 in. w.c.	1.13 kPa	12.4 mbar

An in-line pressure regulator may be required if the line pressure exceeds 10.5 water column inches [26.1 mbar, 2.61 kPa] with all gas appliances running.

LIQUID PETROLEUM GAS (L.P.) pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

	Non-CE and Non-Australian Models	Australian and Korean Models	CE Models
Maximum	13 in. w.c.	3.23 kPa	32.3 mbar

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	Non-CE and Non-Australian Models	Australian and Korean Models	CE Models
Recommended	11 in. w.c.	2.74 kPa	27.4 mbar
Minimum	10 in. w.c.	2.49 kPa	24.9 mbar

For converting Non-CE models from Natural Gas to L.P. Gas:

050 Series	M4979P3
075 Series	M4454P3
F75 Series	M4609P3

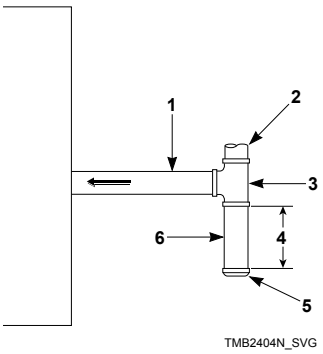
CE GASES refer to Installing CE Gas Drying Tumble Dryers section, the above data does not apply to the CE.

Turn on gas and check all pipe connections (internal and external) for gas leaks with a non-corrosive leak detection fluid. Purge air in gas service line by operating the tumble dryers in the drying mode. If burner does not light and unit goes into lockout, open and close the door and restart. Repeat these steps until burner ignites. Use pipe compound, resistant to actions of L.P. gas, on all pipe threads.

WARNING

Check all pipe connections, internal and external, for gas leaks using a non-corrosive leak detection fluid. To reduce the risk of explosion or fire, DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS! Gas connections should be checked twice a year for leakage.

W635



1. Gas Line to Tumble Dryer
2. Gas Supply Piping System
3. Gas "T" Fitting
4. 3 in. [76 mm] Minimum Gas Pipe
5. Gas Pipe Cap
6. Sediment Trap

Figure 22

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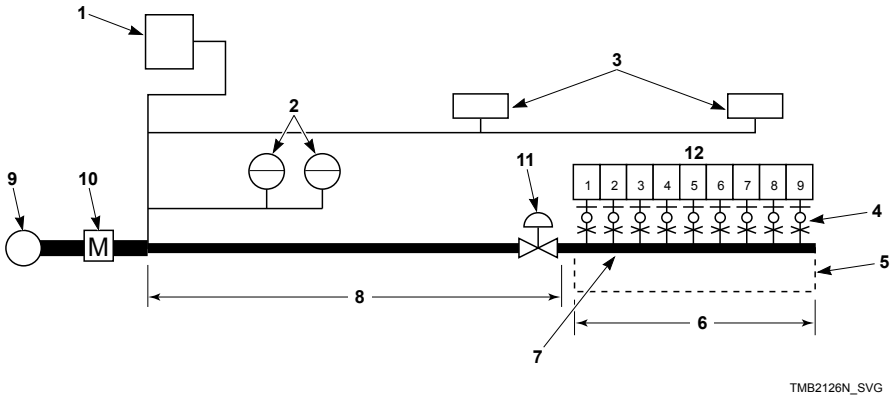
Gas Supply Pipe Sizing and Looping



1. Gas furnace [120,000 Btu/hr. [127 Mj/hr., 35.2 kW]]
2. Gas water heaters [400,000 Btu/hr. [422 Mj/hr., 117.2 kW] each]
3. Gas space heaters [70,000 Btu/hr. [79 Mj/hr., 20.5 kW] each]
4. Sediment traps, supply pressure taps and shut-off valves. Refer to *Figure 22* .
5. 1 in. [25.4 mm] gas pipe loop
6. 19 ft. [5.8 m]
7. Minimum Pipe Size is 0.5 in. [12.7 mm]
8. 25 ft. [7.6 m]
9. Main regulator
10. Gas meter
11. Pressure regulator (if required)
12. 050 series tumble dryers = 130,000 Btu/hr. [137 Mj/hr., 38.1 kW] each; 075 series tumble dryers = 165,000 Btu/hr. [174 Mj/hr., 48.359 kW] each; F75 series tumble dryers = 225,000 Btu/hr. [237 Mj/hr., 65.94 kW] each

Figure 23

SAMPLE CALCULATIONS:

Equivalent length = Total length of main gas supply pipe to the far end of the tumble dryers.

= 25 ft. + 19 ft. [7.6 m + 5.8 m] gas supply pipe

= 44 ft. [13.4 m] Total Gas Line

Total Btu/hr. = The sum of the Btu/hr. of all 050 series tumble dryers being fed by the main gas supply pipe.

= 9 x 130,000 [137, 38.1]

= 1,170,000 Btu/hr. [1,234 Mj/hr., 342.9 kW]

Using *Table 5* , the main supply pipe diameter should be 2 in. [51 mm].

IMPORTANT: Gas loop piping must be installed as illustrated to equalize gas pressure for all tumble dryers connected to single gas service. Other gas using appliances should be connected upstream from loop.

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Gas Pipe Size Required for 1000 Btu Natural Gas — 0.64 Specific Gravity at 7 ± 1.5 inches [17.4 ± 4 mbar, 1.74 ± 0.37 kPa] Water Column Pressure

GasAppliances Total Btu/hr.	Equivalent Length					
	25 feet [7.63 m]	50 feet [15.25 m]	75 feet [22.88 m]	100 feet [30.50 m]	125 feet [38.13 m]	150 feet [45.75 m]
	Based on 0.3 in. Water Column Pressure Drop for Length Given Sizes shown in inches [mm]					
100,000	0.75 [19.05]	0.75 [19.05]	1 [25.40]	1 [25.40]	1 [25.40]	1 [25.40]
120,000	0.75 [19.05]	1 [25.40]	1 [25.40]	1 [25.40]	1 [25.40]	1 [25.40]
140,000	0.75 [19.05]	1 [25.40]	1 [25.40]	1 [25.40]	1 [25.40]	1.25 [31.75]
160,000	0.75 [19.05]	1 [25.40]	1 [25.40]	1.25 [31.75]	1.25 [31.75]	1.25 [31.75]
180,000	1 [25.40]	1 [25.40]	1 [25.40]	1.25 [31.75]	1.25 [31.75]	1.25 [31.75]
200,000	1 [25.40]	1 [25.40]	1.25 [31.75]	1.25 [31.75]	1.25 [31.75]	1.5 [38.10]
300,000	1 [25.40]	1.25 [31.75]	1.25 [31.75]	1.5 [38.10]	1.5 [38.10]	1.5 [38.10]
400,000	1.25 [31.75]	1.25 [31.75]	1.5 [38.10]	1.5 [38.10]	1.5 [38.10]	2 [50.80]
500,000	1.25 [31.75]	1.5 [38.10]	1.5 [38.10]	2 [50.80]	2 [50.80]	2 [50.80]
600,000	1.5 [38.10]	1.5 [38.10]	2 [50.80]	2 [50.80]	2 [50.80]	2 [50.80]
700,000	1.5 [38.10]	2 [50.80]	2 [50.80]	2 [50.80]	2 [50.80]	2.5 [63.50]
800,000	1.5 [38.10]	2 [50.80]	2 [50.80]	2 [50.80]	2.5 [63.50]	2.5 [63.50]
900,000	2 [50.80]	2 [50.80]	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]
1,000,000	2 [50.80]	2 [50.80]	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]
1,100,000	2 [50.80]	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]
1,200,000	2 [50.80]	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]
1,300,000	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	3 [76.20]
1,400,000	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]
1,500,000	2 [50.80]	2.5 [63.50]	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]
1,600,000	2 [50.80]	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]
1,700,000	2 [50.80]	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]
1,800,000	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]	3 [76.20]

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Gas Pipe Size Required for 1000 Btu Natural Gas — 0.64 Specific Gravity at 7 ± 1.5 inches [17.4 ± 4 mbar, 1.74 ± 0.37 kPa] Water Column Pressure						
GasAppliances Total Btu/hr.	**Equivalent Length**					
	25 feet [7.63 m]	**50 feet [15.25 m]**	**75 feet [22.88 m]**	**100 feet [30.50 m]**	**125 feet [38.13 m]**	**150 feet [45.75 m]**
	Based on 0.3 in. Water Column Pressure Drop for Length Given **Sizes shown in inches [mm]**					
1,900,000	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]	3 [76.20]
2,000,000	2.5 [63.50]	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]	3.5 [88.90]
2,200,000	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]	3.5 [88.90]	3.5 [88.90]
2,400,000	2.5 [63.50]	3 [76.20]	3 [76.20]	3 [76.20]	3.5 [88.90]	3.5 [88.90]
2,600,000	2.5 [63.50]	3 [76.20]	3 [76.20]	3.5 [88.90]	3.5 [88.90]	3.5 [88.90]
2,800,000	2.5 [63.50]	3 [76.20]	3 [76.20]	3.5 [88.90]	3.5 [88.90]	3.5 [88.90]
3,000,000	2.5 [63.50]	3 [76.20]	3.5 [88.90]	3.5 [88.90]	3.5 [88.90]	4 [101.60]
For L.P. Gas, correct the total Btu/hr by multiplying it by 0.6. The answer is the equivalent Btu on the above chart.						

Table 5

High Altitude Burner Orifice Sizing

For proper operation at altitudes above 2000 feet [610 m], the gas burner orifice size must be reduced to ensure complete combustion. Refer to *Table 6* .

For CE models, consult local gas supplier.

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Model	Gas	Altitude	Burner Orifice				New Rate
		feet [meters]	No.	inches [mm]	Quantity	Part Number	Btu/hr. [Mj/hr.]*
050 Series	Natural Gas	2001-4000 [610-1220]	27	0.1440 [3.7]	2	M400998	119,600 [126]
		4001-6000 [1221-1830]	28	0.1405 [3.6]		M401014	109,200 [115]
		6001-8000 [1831-2440]	29	0.1360 [3.4]		M400997	98,800 [104]
		8001-10,000 [2441-3050]	30	0.1285 [3.3]		M401021	88,400 [93]
	L.P. Gas	2001-4000 [610-1220]	43	0.0890 [2.3]		M406184	119,600 [126]
		4001-6000 [1221-1830]	44	0.0860 [2.2]		M401011	109,200 [115]
		6001-8000 [1831-2440]	45	0.0820 [2.1]		M401027	98,800 [104]
		8001-10,000 [2441-3050]	46	0.0810 [2.1]		M401003	88,400 [93]
Classic Line 075 Series	Natural Gas	2001-4000 [610-1220]	29	0.1360 [3.4]	3	M400997	151,800 [160]
		4001-6000 [1221-1830]	30	0.1285 [3.3]		M401021	138,600 [146]
		6001-8000 [1831-2440]	1/8	0.1250 [3.2]		M402489	125,400 [132]
		8001-10,000 [2441-3050]	31	0.1200 [3.0]		M401017	112,200 [118]
	L.P. Gas	2001-4000 [610-1220]	45	0.0820 [2.1]		M401027	165,000 [174]
		4001-6000 [1221-1830]	47	0.0785 [2.0]		M400999	138,600 [146]
		6001-8000 [1831-2440]	47	0.0785 [2.0]		M400999	125,400 [132]
		8001-10,000 [2441-3050]	48	0.0760 [1.9]		M401001	112,200 [118]

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Model	Gas	Altitude	Burner Orifice				New Rate
		feet [meters]	No.	inches [mm]	Quantity	Part Number	Btu/hr. [Mj/hr.]*
Eco Line 075 Series	Natural Gas 50 Hz	2001-4000 [610-1220]	---	0.1299 [3.3]	2	44253801	101,200 [107]
		4001-6000 [1221-1830]	1/8	0.1250 [3.2]		M402489	92,400 [97]
		6001-8000 [1831-2440]	---	0.1220 [3.1]		70070903	83,600 [88]
		8001-10,000 [2441-3050]	31	0.1200 [3.0]		M401017	74,800 [79]
	Natural Gas 60 Hz	2001-4000 [610-1220]	28	0.1405 [3.6]		M401014	119,600 [126]
		4001-6000 [1221-1830]	29	0.1360 [---]		M400997	109,200 [115]
		6001-8000 [1831-2440]	---	0.1299 [3.3]		44253801	98,800 [104]
		8001-10,000 [2441-3050]	1/8	0.1250 [3.2]		M402489	88,400 [93]
F75 Series	Natural Gas	2001-4000 [610-1220]	22	0.1570 [4.0]	3	M402996	207,000 [218]
		4001-6000 [1221-1830]	24	0.1520 [3.9]		M402980	189,000 [199]
		6001-8000 [1831-2440]	26	0.1470 [3.7]		M401000	171,000 [180]
		8001-10,000 [2441-3050]	28	0.1405 [3.6]		M401014	153,000 [161]
	L.P. Gas	2001-4000 [610-1220]	41	0.0960 [2.4]		M401015	225,000 [237]
		4001-6000 [1221-1830]	42	0.0935 [2.4]		M403017	189,000 [199]
		6001-8000 [1831-2440]	43	0.0890 [2.3]		M406184	171,000 [180]
		8001-10,000 [2441-3050]	44	0.0860 [2.2]		M401001	153,000 [161]

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Model	Gas	Altitude	Burner Orifice				New Rate
		feet [meters]	No.	inches [mm]	Quantity	Part Number	Btu/hr. [Mj/hr.]*
* Btu/hr. derate of 4% per 1000 feet [305 meters] of altitude.							
NOTE: Eco line is only available in natural gas.							

Table 6

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Electrical Requirements

Electrical Requirements

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/ panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

WARNING

To reduce the risk of fire and electric shock, check with a qualified service person for proper grounding procedures. Improper connection of the equipment grounding conductor may result in a risk of electric shock.

W068R1

WARNING

To reduce the risk of fire and electric shock, if electrical supply is coming from a three phase service, DO NOT connect a “High Leg” or “Stinger Leg” to a single phase machine. On a three phase machine, if there is a “High Leg” or “Stinger Leg” it should be connected to L3.

W069

IMPORTANT: Electrical connections must be made by a qualified electrician using data on serial plate, installation manuals and wiring diagram provided with machine and according to local codes. Install a circuit breaker as close to the tumble dryer as possible. If more than one tumble dryer is being installed, a circuit breaker must be provided for each.

NOTE: Connect machine to an individual branch circuit not shared with lighting or other equipment.

NOTE: 3 Phase Machines Only - Do not use fuses to avoid the possibility of “single phasing” and causing premature failure of the motors.

WARNING

In case of servicing (or putting the tumble dryer out of order), disconnect the tumble dryer from the main supply by switching off the circuit breaker.

W796

Wiring Diagram

The wiring diagram is located in the junction or contactor box.

The wiring diagram part number is in the lower portion of the electrical data on the serial plate.

Wiring for Central Pay

Applicable for the following control suffixes: 3K, 3L, BK, BL, KK, KL, LK, LL, WK and WL.

System Connections

Connection to central pay systems will be made in the rear junction box of the tumble dryer. For stack models, connection for both the lower control and upper control will be made in the upper junction box.

Locate the harness with Black, Blue, Gray and Brown wires. The upper and lower harness can be identified by a yellow label on the harness tubing indicating "UPPER" and a white label on the harness tubing indicating "LOWER".

The wire colors will be the same regardless of control type. Splice the after-market central pay system wires to the tumble dryer control wire harness as follows.

Wire Colors	Description
BLK wire	24V AC/DC from central pay system
BLU wire	Common (negative) from central pay system
GRY wire	Machine busy signal to central pay system
BRN wire	Machine busy signal to central pay system

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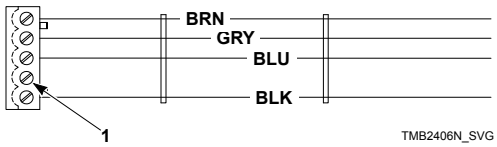
Start Pulse Requirements

All control types will consider a pulse valid if it is between 200 and 1000 milliseconds in length, with a minimum of 200 milliseconds between pulses.

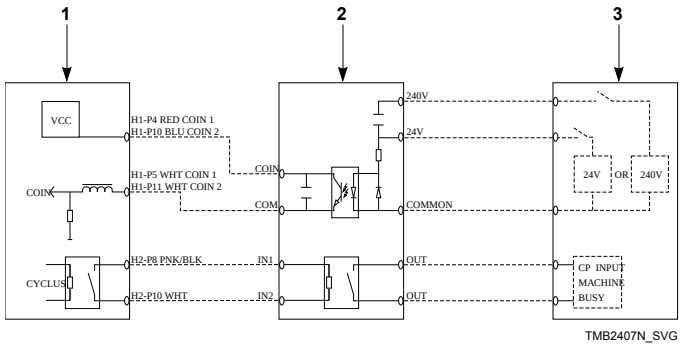
DX4 Control Only (3L or 3K Control Suffixes)

The DX4 control tumble dryer comes configured to operate at 24 Volts AC or DC. If the central pay system provides 200-240V AC, conversion is possible. Loosen screw and move the BLK wire to the adjacent open terminal and tighten securely. Refer to *Figure 24* and *Figure 25* .



1. Move BLK wire here to configure control to accept 200-240 Volts from central pay system

Figure 24



1. DX4 Control
2. CP Board
3. Central Pay System

Figure 25

Grounding Instructions

NOTE: To ensure protection against shock, this tumble dryer MUST be electrically grounded in accordance with the local codes, or in the absence of local codes, with the latest edition of the National Electrical Code ANSI/NFPA No. 70. In Canada the electrical connections are to be made in accordance with CSA C22.1 latest edition Canadian Electrical Code, or local codes. Electrical work should be done by a qualified electrician.

This tumble dryer must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This tumble dryer must be connected to a grounded metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the appropriate ground location.

- Metal conduit and/or BX cable is not considered ground.
- Connecting the Neutral from the electrical service box to the tumble dryer ground screw does not constitute a ground.
- A dedicated ground conduit (wire) must be connected between the electrical service box ground bar and tumble dryer ground screw.

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WARNING

To reduce the risk of electrical shock, de-energize the electrical circuit being connected to the tumble dryer before making any electrical connections. All electrical connections should be made by a qualified electrician. Never attempt to connect a live circuit.

W409R1

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

W071

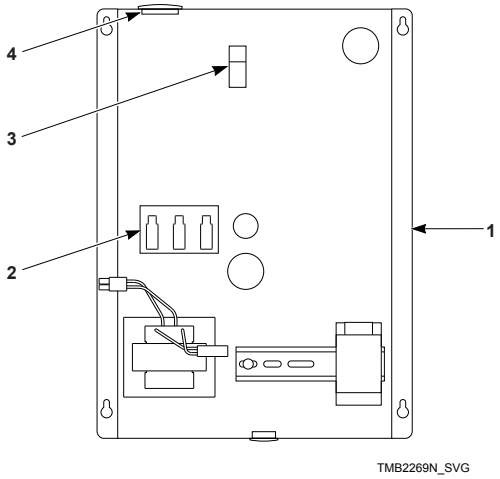
For CE Models Only

All OPL (non-vend) models are factory-equipped with an emergency stop button on the front panel. If the emergency stop function is desired on coin-operated models, an external emergency stop button may be installed.

NOTE: Activation of the emergency stop switch stops all machine control circuit functions, but DOES NOT remove all electrical power from machine.

Service/Ground Location

Ground and Terminal Block Locations for Non-CE Models



1. Junction Box
2. Terminal Block
3. Earth/Ground
4. Electrical Service

Figure 26

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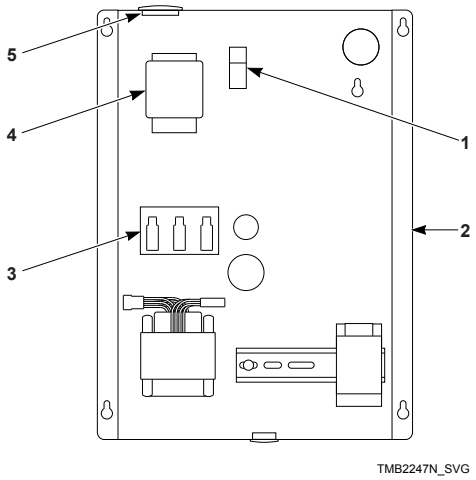
Ground and Terminal Block Locations for CE Models



1. Earth/Ground
2. Junction Box
3. Terminal Block
4. Power Disconnect (Models Through 7/31/11)
5. Electrical Service

Figure 27

To Connect Electrical Service To The Tumble Dryer

NOTE: The wiring diagram is located in the junction box.

1. Install a circuit breaker as close to the tumble dryer as possible. If more than one tumble dryer is being installed, a disconnect switch or circuit breaker should be provided for each. This will make it possible to disconnect each tumble dryer for maintenance purposes.
2. Connect the conduit-encased leads to the disconnect switch, or circuit breaker. Connect the wire leads to the appropriate labeled terminal on the terminal block. The ground wire must be connected to the ground connection as shown in *Figure 26* or *Figure 27* .
3. Check the electrical service phase sequence (three phase only) as follows:
   a. Energize the electrical service (on reversing tumble dryers, ensure nonreversing is selected) and momentarily start the tumble dryer. Check the direction of the cylinder rotation. If the cylinder rotates clockwise (viewed from the front), the phase sequence is correct. If the cylinder rotates counterclockwise, proceed with step b.

   NOTE: When viewed from the front, the fan should rotate clockwise on 050 and 075 series models and counterclockwise on F75 series models.

   b. Disconnect and reverse any two service leads on the terminal block (example: switch L2 and L3 on terminal block).

Jumper Configuration Instructions

Changing the transformer configuration jumper is required, PRIOR TO SUPPLYING POWER TO THE MACHINE, if any of the following apply:

IMPORTANT: Failure to install the proper configuration jumper may result in damage to sensitive electronic controls and may void warranty.

- Location voltage 200 – 208 Volt service and connecting a model rated for 240 Volt operation.

Replace the 240 Volt jumper with the 208 Volt jumper per the conversion label, located on the rear of the tumble dryer, sign and date conversion label to document the conversion.

Ferrite Ring Installation

Gas and Steam Models with OM and RM Control Suffixes Only (Models Through 7/31/11)

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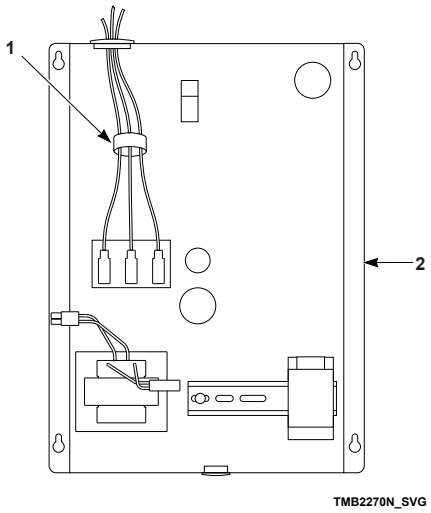
The ferrite ring provided in the literature packet must be installed over the power leads during connection of electrical service. The ferrite protects the sensitive electronic controls from destructive electrical disturbances which may be present on power lines to the machine. Failure to properly install the ferrite ring may result in damage to the electronic controls and will void control warranty.

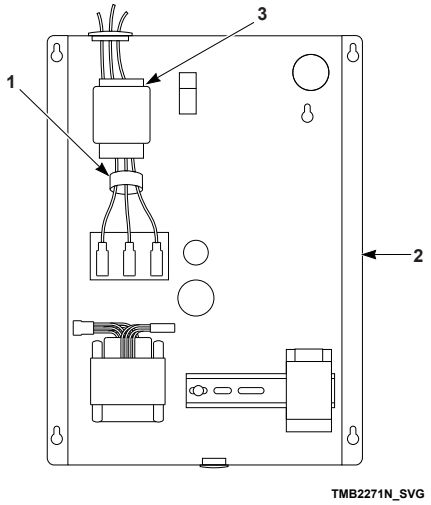
To install:

1. Immediately after connection of power leads and before applying power to machine, locate each of the incoming service leads including ground.
2. Snap the ferrite ring closed over all the service leads inside of the contactor box as shown. It is important that the ferrite ring be installed inside the contactor box. Refer to *Figure 28* . Do not install the ferrite outside of the box or other area. Make sure that service leads are in the center of the ferrite before closing the ring so as not to pinch or damage leads.

Non-CE Models



CE Models



1. Ferrite Ring
2. Junction Box
3. Models Through 7/31/11

Figure 28

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Electrical Specifications

NOTE: Wire sizes were obtained from the Canadian Electrical Code for 75 C. wire and are intended for use as a guideline only. Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements.

NOTE: Electrical specifications below are subject to change without notice. Always refer to product serial plate for most current specifications of product being installed.

NOTE: Use copper conductors only.

NOTE: Connect to individual branch circuit.

NOTE: 3 Phase Only – Each tumble dryer must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of "single phasing" and causing premature failure of the motor(s).

050 Series Gas and Steam Models

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG [mm ^{2}]
120V/60Hz/1ph	L1, Neutral and ground	9.3	N/A	15A – 1 pole	14 [2.5]
120/208-240V/60Hz/1ph	L1, L2, Neutral and ground	N/A	12	15A – 1 pole	14 [2.5]
208-240V/60Hz/1ph	L1, L2, Neutral and ground	5.1	N/A	15A – 1 pole	14 [2.5]
200-208-240V/60Hz/1ph	L1, L2 and ground	5.1	N/A	10A – 2 pole	14 [2.5]
230-240V/50Hz/1ph	L1, Neutral and ground	6.3	6.9	15A – 1 pole	14 [2.5]
200-208/240V/60Hz/3ph	L1, L2, L3 and ground	2.8	4.0	10A – 3 pole	14 [2.5]
200V/50Hz/3ph	L1, L2, L3 and ground	3.3	4.2	10A – 3 pole	14 [2.5]
230-240V/50Hz/3ph	L1, L2, L3 and ground	3.1	4.3	10A – 3 pole	14 [2.5]
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	1.6	2.0	10A – 3 pole	14 [2.5]
400-415V/50Hz/3ph	L1, L2, L3 and ground	1.6	2.0	10A – 3 pole	14 [2.5]
440V/60Hz/3ph	L1, L2, L3 and ground	1.4	1.9	10A – 3 pole	14 [2.5]
460-480V/60Hz/3ph	L1, L2, L3 and ground	1.4	1.9	10A – 3 pole	14 [2.5]
N/A = Not Applicable					

Table 7

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075 Series Gas and Steam Models

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG [mm ^{2}]
120V/60Hz/1ph	L1, Neutral and ground	13.8	N/A	20A – 1 pole	12 [4]
120/208-240V/60Hz/1ph	L1, L2, Neutral and ground	13	13	20A – 1 pole	12 [4]
208-240V/60Hz/1ph	L1, L2, Neutral and ground	7.6	N/A	20A – 1 pole	12 [4]
200-208-240V/60Hz/1ph	L1, L2 and ground	7.6	N/A	15A – 2 pole	14 [2.5]
230-240V/50Hz/1ph	L1, Neutral and ground	6.7	7.0	15A – 1 pole	14 [2.5]
200-208/240V/60Hz/3ph	L1, L2, L3 and ground	3.8	4.3	10A – 3 pole	14 [2.5]
200V/50Hz/3ph	L1, L2, L3 and ground	3.5	4.5	10A – 3 pole	14 [2.5]
230-240V/50Hz/3ph	L1, L2, L3 and ground	3.5	4.9	10A – 3 pole	14 [2.5]
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	1.8	2.1	10A – 3 pole	14 [2.5]
400-415V/50Hz/3ph	L1, L2, L3 and ground	1.8	2.1	10A – 3 pole	14 [2.5]
440V/60Hz/3ph	L1, L2, L3 and ground	1.9	2.1	10A – 3 pole	14 [2.5]
460-480V/60Hz/3ph	L1, L2, L3 and ground	1.9	2.1	10A – 3 pole	14 [2.5]
N/A = Not Applicable					

Table 8

F75 Gas Models Only

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG [mm ^{2}]
200-208/240V/60Hz/3ph	L1, L2, L3 and ground	N/A	6.3	15A – 3 pole	14 [2.5]
460-480V/60Hz/3ph	L1, L2, L3 and ground	N/A	3.1	10A – 3 pole	14 [2.5]
N/A = Not Applicable					

Table 9

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050 and Classic Line 075 Series Electric Models

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG [mm^2]
240V/50Hz/1ph (050 Series only)	L1, Neutral and Ground	93	95	125A – 1 pole	1 [35]
200-208V/60Hz/3ph	L1, L2, L3 and ground	89	88	125A – 3 pole	1 [35]
200V/50Hz/3ph	L1, L2, L3 and ground	84	85	125A – 3 pole	1 [35]
230V/50Hz/3ph	L1, L2, L3 and ground	73	75	100A – 3 pole	3 [26.7]
240V/50Hz/3ph	L1, L2, L3 and ground	79	78	100A – 3 pole	3 [26.7]
240V/60Hz/3ph	L1, L2, L3 and ground	79	78	100A – 3 pole	3 [26.7]
380V/50 or 60Hz/3ph	L1, L2, L3 and ground	47	48	60A – 3 pole	6 [16]
400-415V/50Hz/3ph	L1, L2, L3 and ground	43	44	60A – 3 pole	6 [16]
440V/60Hz/3ph	L1, L2, L3 and ground	41	41	50A – 3 pole	6 [16]
480V/60Hz/3ph	L1, L2, L3 and ground	38	38	50A – 3 pole	6 [16]

Table 10

Eco Line 075 Series Electric Models

Serial Plate Rating	Terminal Block Connections Required	Serial Plate Amps		Recommended Circuit	
		Nonreversing	Reversing	Breaker Rating	Wire Size AWG [mm^2]
200-208V/60Hz/3ph	L1, L2, L3 and ground	63	63	80A - 3 pole	4 [25]
240V/60Hz/3ph	L1, L2, L3 and ground	56	56	70A - 3 pole	4 [25]
380V/50Hz/3ph	L1, L2, L3 and ground	34.3	35.3	45A - 3 pole	8 [10]
380V/60Hz/3ph	L1, L2, L3 and ground	32.6	32.6	45A - 3 pole	8 [10]
400-415V/50Hz/3ph	L1, L2, L3 and ground	32.3	33.3	40A - 3 pole	8 [10]
440V/60Hz/3ph	L1, L2, L3 and ground	28.4	28.4	40A - 3 pole	8 [10]
460-480V/60Hz/3ph	L1, L2, L3 and ground	26.9	26.9	35A - 3 pole	8 [10]

Table 11

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Steam Requirements

Steam Requirements

NOTE: Machines require a constant 80 to 100 psig [5.3 to 6.9 bar] steam service for optimum operation. The maximum allowable steam pressure for use with 50 Hertz tumble dryers is 125 psig [8.6 bar]. In no case may the pressure exceed the above value.

Obtain specific steam service pipe sizes from steam system supplier or a qualified steam fitter.

- Refer to *Figure 29* for proper steam pipe configurations.
- To prevent condensate draining from headers to tumble dryer, piping should have a minimum 12 inch [305 mm] rise above respective header. Do not make steam connection to header with a horizontal or downward facing tee or elbow.
- Whenever possible, horizontal runs of steam lines must drain, by gravity, to respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of tumble dryer. If pockets or improper drainage cannot be eliminated, install a bypass trap to drain condensate from the low point in the steam header to the return.
- In both steam supply and steam return line, it is recommended that each have a pipe union and shut-off valve. This will enable you to disconnect the steam connections and service the tumble dryer while your laundry facility is in operation.
- Connect the steam solenoid valve to the related steam coil inlet connection with nipples, flex hoses, unions and tees.
- Strainers may require cleaning due to materials from hoses or pipes.
- Install vacuum breaker (optional), bucket trap with built-in strainer and check valve. For successful operation of tumble dryer, install trap 18 inches [457 mm] below coil and as near to the tumble dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturer's instructions. If steam is gravity returned to boiler, omit trap but install vacuum breaker and check valve in return line near tumble dryer. Gravity return requires entire return plumbing be below steam coil outlets.
- Install union and shut-off valve in return line and make final pipe connections to return header.

  NOTE: To prevent water hammering, route return lines below outlets of steam coils.

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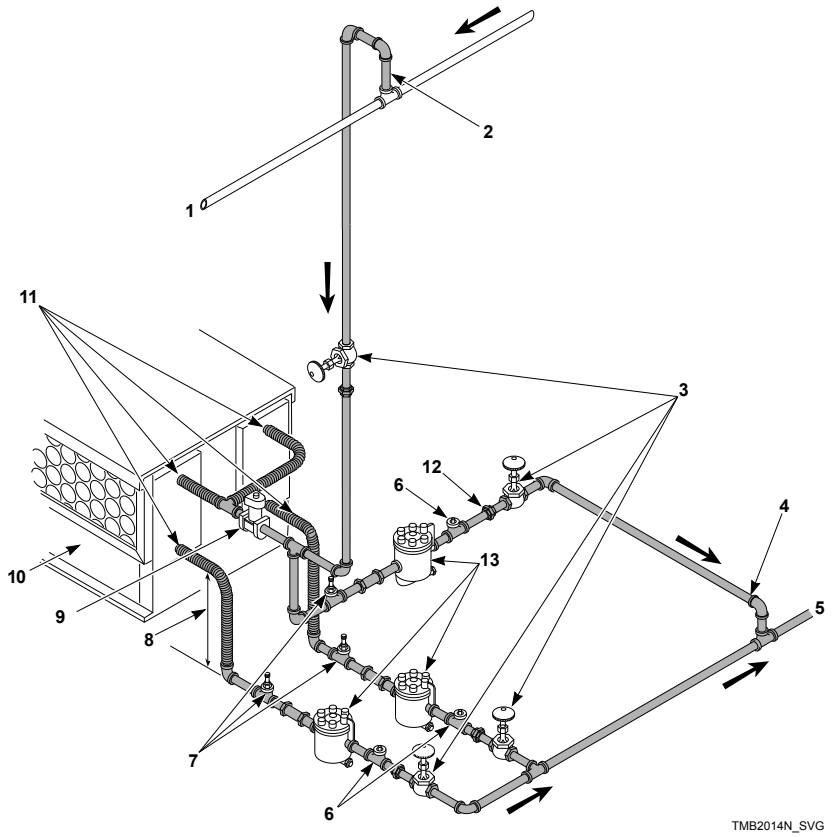

NOTE: Refer to *Table 12* for sizing of steam lines. Piping must also be sized accordingly for length of runs and number of elbows.

1. Supply
2. 12 in. [305 mm] Riser
3. Shut-Off Valve
4. Condensate Return Line from Supply Line
5. Return
6. Check Valve
7. Vacuum Breaker (Optional)
8. 18 in. [457 mm] Drop
9. Solenoid Valve (Supplied with machine)
10. Steam Bonnet
11. Flexible Line
12. Union
13. Trap with Built-In Strainer

Figure 29

Steam Pressure PSI [bar]	Minimum Supply Pipe Diameter	Steam Trap Size* Pounds Condensate/Hour [Kilograms Condensate/Hour]
80-100 [5.3-6.9]	3/4 in. NPT	160 [72.6]

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Steam Pressure PSI [bar]	Minimum Supply Pipe Diameter	Steam Trap Size* Pounds Condensate/Hour [Kilograms Condensate/Hour]
*Based on 6.9 bar.		

Table 12

Piping Recommendations

- Trap each steam coil individually. Always keep the trap clean and in good working condition.
- When tumble dryer is on the end of a line of equipment, extend header at least 4 feet [1.2 m] beyond tumble dryer. Install shut-off valve, union, check valve and bypass trap at end of line. If gravity return to boiler, omit trap.
- Insulate steam supply and return lines for safety of operator and safety while servicing tumble dryer.

WARNING

All system components must have a 125 psig [8.6 bar] working pressure. Shut-off valves must be installed upstream of the steam solenoid valve and downstream of each steam trap so components can be isolated for maintenance or emergency purposes. All components (solenoid valve, traps) must be supported to minimize loads on the tumbler steam coil connections.

W701

Installing Steam Trap and Making Condensate Return Connections

The steam trap must be installed and the coil outlet connections must be connected to the condensate return lines. The following steps outline the procedure for installing the steam trap and connecting the condensate return lines. Refer to *Figure 29* for typical installations.

1. Use flexible lines between steam inlet solenoid and steam coils, as well as outlet between steam coil and traps.
2. If necessary, install a strainer at the end of each flexible hose.
3. Install a steam trap to each strainer.

   IMPORTANT: Steam trap must be installed a minimum of 18 inches [457 mm] below the steam coil outlet connections.
4. Install a shut-off valve to each steam trap.
5. Connect to the condensate return lines.
6. For steam solenoid valve wiring connections, refer to Wiring Diagram supplied with tumble dryer.

Thermal Oil Prep

It is the responsibility of the customer to install appropriate coil and heating system for thermal oil prep models. The manufacturer is not responsible for the performance or safety of the customer installed thermal oil system. To ensure proper operation, refer to the Specifications and Dimensions section for the Btu input of equivalent steam models. Thermal oil systems that do not deliver appropriate Btus will dry slower. For solenoid valve wiring connections, refer to the Wiring Diagram supplied with tumble dryer.

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Single Drop Timer

NOTE: The following information is for models with an SD control suffix only.

Power-Up Mode

When power is applied to the tumble dryer, the IN USE light flashes factory status information. Following this, the control goes into READY Mode (light off) or RUN Mode if power was interrupted during a cycle (light on, time remaining unchanged). If a power disruption is less than 5 seconds, with a cycle in process, the control will enter Run Mode once power is restored and continue the cycle. If a power disruption is more than 5 seconds, with a cycle in process, the control will enter Start Mode once power is restored.

If the dry time dipswitch settings have not changed from the factory default, the IN USE LED will flash two to five times, depending on model.

Ready Mode

In READY Mode (light off), the control waits for the vend to be satisfied. When vend is satisfied the control goes into START Mode.

Start Mode

In START Mode (light on), the vend has been satisfied but the start button has not been pressed. Time remaining in the cycle will not change until the start button is pressed. When the start button is pressed the machine goes into RUN Mode.

Run Mode

In RUN Mode (light on), the machine is running a cycle and the time remaining is counting down. When time remaining counts down to zero, the control goes into READY Mode.

Door Open Mode

In Door Open Mode, the control turns off the heater and motor when the door is opened during a run cycle. The timer will continue to count down time and the IN USE LED is lit.

End of Cycle Mode

In End of Cycle Mode, a cycle is complete and the IN USE LED is off. The control remains in this mode until the door is opened or additional vend has been satisfied.

Setting Dry Time Dipswitches

To change the dry time on the tumble dryer, combinations of dipswitches can be set on the control.

There are eight dipswitches on the tumble dryer control. The first six switches are used to program the amount of additional heat time given for each coin pulse. The additional drying time is added to the factory default minimum heat time of one minute. A value of 1 to 64 minutes of additional drying time is available for each coin drop pulse.

Models Through Serial No. 0908xxxxx

The last two switches are used to program the amount of additional cool down time. The additional cool down time is added to the factory default minimum cool down time of 1 minute. A value of 1 to 3 additional minutes is available. The control is shipped from the factory programmed with 1 minute of minimum heat time, preset with 7 additional minutes of drying time (dipswitches 1, 2 and 3 in ON position) and 1 minute of minimum cool down time for a total time of 9 minutes for a coin pulse.

Models Starting Serial No. 0909xxxxx

The seventh switch is used to program the amount of additional cool down time. The additional cool down time is added to the factory default minimum cool down time of 1 minute. A value of 3 additional minutes is available. The control is shipped from the factory programmed with 1 minute of minimum heat time, preset with 7 additional minutes of drying time (dipswitches 1, 2 and 3 in ON position) and 1 minute of minimum cool down time for a total time of 9 minutes for a coin pulse.

The eight switch is used for the cycle reset. If the switch is OFF (default), the control will save the time left on a cycle in case of a power failure. If the switch is ON, the control will clear the cycle and go back to Ready Mode if there is a power failure.

The control reads the dipswitch settings at power-up. The control must be powered down to change the dipswitch settings.

To change the time for a coin pulse, the desired dry time dipswitches must be set to ON position. All other dipswitches must be in OFF position.

NOTE: The control must be powered down for 10 seconds before the dipswitches can be changed.

Resetting Cycle Time to Zero

(Models Starting Serial No. 0909xxxxx)

To remove any cycle time that may have accumulated on the control during setup, the cycle time on the control can be reset to zero.

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To reset the time, unplug the tumble dryer and set dipswitch 8 to ON position. Restore power to the tumble dryer for 10 seconds and once again unplug tumble dryer. Set dipswitch 8 to OFF position and restore power to the tumble dryer.

Dipswitch Settings

Models Through Serial No. 0908xxxxx

Heat Time Per Coin Pulse (in minutes)	Heat Switch Number					
	1	2	3	4	5	6
1	OFF	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF	OFF
6	ON	OFF	ON	OFF	OFF	OFF
7	OFF	ON	ON	OFF	OFF	OFF
8 (factory default)	ON	ON	ON	OFF	OFF	OFF
9	OFF	OFF	OFF	ON	OFF	OFF
10	ON	OFF	OFF	ON	OFF	OFF
11	OFF	ON	OFF	ON	OFF	OFF
12	ON	ON	OFF	ON	OFF	OFF
13	OFF	OFF	ON	ON	OFF	OFF
14	ON	OFF	ON	ON	OFF	OFF
15	OFF	ON	ON	ON	OFF	OFF
16	ON	ON	ON	ON	OFF	OFF
17	OFF	OFF	OFF	OFF	ON	OFF
18	ON	OFF	OFF	OFF	ON	OFF
19	OFF	ON	OFF	OFF	ON	OFF
20	ON	ON	OFF	OFF	ON	OFF
21	OFF	OFF	ON	OFF	ON	OFF
22	ON	OFF	ON	OFF	ON	OFF

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Heat Time Per Coin Pulse (in minutes)	Heat Switch Number					
	1	2	3	4	5	6
23	OFF	ON	ON	OFF	ON	OFF
24	ON	ON	ON	OFF	ON	OFF
25	OFF	OFF	OFF	ON	ON	OFF
26	ON	OFF	OFF	ON	ON	OFF
27	OFF	ON	OFF	ON	ON	OFF
28	ON	ON	OFF	ON	ON	OFF
29	OFF	OFF	ON	ON	ON	OFF
30	ON	OFF	ON	ON	ON	OFF
31	OFF	ON	ON	ON	ON	OFF
32	ON	ON	ON	ON	ON	OFF
33	OFF	OFF	OFF	OFF	OFF	ON
34	ON	OFF	OFF	OFF	OFF	ON
35	OFF	ON	OFF	OFF	OFF	ON
36	ON	ON	OFF	OFF	OFF	ON
37	OFF	OFF	ON	OFF	OFF	ON
38	ON	OFF	ON	OFF	OFF	ON
39	OFF	ON	ON	OFF	OFF	ON
40	ON	ON	ON	OFF	OFF	ON
41	OFF	OFF	OFF	ON	OFF	ON
42	ON	OFF	OFF	ON	OFF	ON
43	OFF	ON	OFF	ON	OFF	ON
44	ON	ON	OFF	ON	OFF	ON
45	OFF	OFF	ON	ON	OFF	ON
46	ON	OFF	ON	ON	OFF	ON
47	OFF	ON	ON	ON	OFF	ON
48	ON	ON	ON	ON	OFF	ON

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Heat Time Per Coin Pulse (in minutes)	Heat Switch Number					
	1	2	3	4	5	6
49	OFF	OFF	OFF	OFF	ON	ON
50	ON	OFF	OFF	OFF	ON	ON
51	OFF	ON	OFF	OFF	ON	ON
52	ON	ON	OFF	OFF	ON	ON
53	OFF	OFF	ON	OFF	ON	ON
54	ON	OFF	ON	OFF	ON	ON
55	OFF	ON	ON	OFF	ON	ON
56	ON	ON	ON	OFF	ON	ON
57	OFF	OFF	OFF	ON	ON	ON
58	ON	OFF	OFF	ON	ON	ON
59	OFF	ON	OFF	ON	ON	ON
60	ON	ON	OFF	ON	ON	ON
61	OFF	OFF	ON	ON	ON	ON
62	ON	OFF	ON	ON	ON	ON
63	OFF	ON	ON	ON	ON	ON
64	ON	ON	ON	ON	ON	ON

Cool Down Per Cycle (in minutes)	Cool Down Switch Number	
	7	8
1 (factory default)	OFF	OFF
2	ON	OFF
3	OFF	ON

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Cool Down Per Cycle (in minutes)	Cool Down Switch Number	
4	ON	ON

Models Starting Serial No. 0909xxxxx

Cool Down Per Cycle (in minutes)	Cool Down Switch Number	Cycle Reset Switch Number
	7	8
1 (factory default)	OFF	OFF ON
3	ON	

Total Cycle Time = Heat Time + Cool Down Time

Topoffs

Any time the control receives a coin drop pulse during a cycle it will add the programmed dry time to the time currently remaining in the cycle. The maximum cycle time is 99 minutes, the control will not add time beyond 99 minutes. The cool down time will not change.

If the control receives a coin drop pulse during cool down the IN USE LED will flash briefly to indicate the coin input, the machine will exit cool down and it will start heating. The cycle time will be equal to the programmed dry time.

Temperature Selector Switch

For five minutes after the control is powered up, there is a diagnostic feature that allows the temperature selector switches to be tested.

When the temperature selector is changed, the new setting is displayed by flashing the IN USE LED as follows:

High/Normal	4 flashes
Medium/PP	3 flashes
Low/Delicate	2 flashes
No Heat	1 flash

NOTE: To change dipswitch settings refer to Dipswitch Settings section.

To Program a Short Test Cycle

1. Unplug machine power cord.
2. Write down machine control dip switch settings, then set them all to the off position. Refer to *Figure 30* .
3. Plug machine in and start a cycle.

   NOTE: With all control dip switches off, the total cycle time will be 2 minutes long (1 minute of heat and 1 minute of cool down).
4. Once all testing is complete, unplug machine and re-set dip switches to their original settings.
5. Plug machine in.

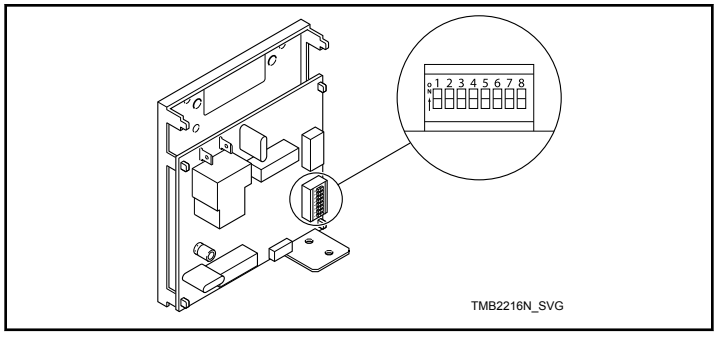

Figure 30

Error Codes

Display	Definition	Corrective Action
AF (flashing)	Airflow switch opened/closed 5 or more times in a running cycle.	Check airflow switch. Replace if inoperative.

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Operating Instructions

Operating Instructions

WARNING

To reduce the risk of fire:

- **DO NOT DRY articles containing foam rubber or similarly textured rubberlike materials.**
- **DO NOT DRY plastics, anything containing wax or chemicals such as mops and cleaning cloths, or anything dry-cleaned at home with a dry-cleaning solvent.**
- **DO NOT TUMBLE fiberglass curtains and draperies unless the label says it can be done. If they are dried, wipe out the cylinder with a damp cloth to remove particles of fiberglass.**

W076

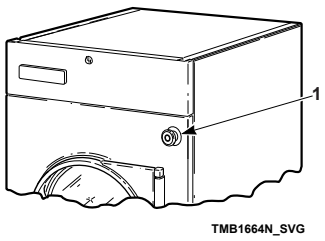
WARNING

To reduce the risk of serious injury, allow cylinder to stop before cleaning lint screen.

W412

Emergency Stop Button On CE Models

All CE approved OPL tumble dryers are factory equipped with an emergency stop button located on the front panel. Refer to *Figure 31* .



1. Emergency Stop Button

Figure 31

To operate emergency stop button:

- Press red emergency stop button to stop all action.
- To restart machine, pull red emergency stop button out and press START pad or button.

NOTE: Activation of the emergency stop button stops all machine control circuit functions, but DOES NOT remove all electrical power from machine.

Operating Instructions

WARNING

To reduce the risk of fire, electric shock, or injury to persons, read the IMPORTANT SAFETY INSTRUCTIONS before operating this appliance.

W727

IMPORTANT: This appliance shall not be used to dry off solvents or dry cleaning fluids.

1. Clean Lint Screen/Compartment

a. Remove any accumulated lint from the lint screen and compartment.

b. Close panel tightly against tumble dryer frame and lock panel securely, if applicable.

IMPORTANT: Clean lint screen and lint compartment daily. Failure to clean the lint screen daily will result in higher than normal temperatures that may damage laundry.

WARNING

To reduce the risk of fire and risk of lint collecting in exhaust duct, do not operate tumbler without lint filter in place.

W772

2. Load Laundry

a. Open loading door and load cylinder with laundry. Maximum drying load is:

Model	Pound [Kg]
050	50 [22.7]
075	75 [34]
F75	75 [34]

DO NOT OVERLOAD.

NOTE: Overloading causes slow drying and wrinkling.

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b. Close loading door. Tumble dryer will not operate with the door open.

3. Determine Control Type and Temperature Setting
   a. Refer to the various controls and follow the instructions for the appropriate control type.
   b. The type of fabric being dried will determine the temperature setting. Consult the fabric care label or fabric manufacturer to determine proper temperature setting.

   IMPORTANT: Always follow the fabric care instructions supplied by the garment manufacturer.

4. Remove Laundry
   a. When the cycle is complete, open door and remove the laundry.

Reversing Operation

Tumble dryers with the reversing option prevent the tangling of large pieces of laundry and minimize wrinkling. These tumble dryers are equipped with a second motor and additional controls which reverse the rotation direction of the cylinder.

Some models may have a switch or touchpad in the control panel area so the operator can select the reversing or nonreversing operation. In nonreversing mode, the cylinder will always turn clockwise (as viewed from the front of the tumble dryer). If the cylinder is turning counterclockwise when switched to nonreversing, it will continue for a few seconds and then start up in the proper direction. Refer to Programming Manual for more information on reversing.

IMPORTANT: After any electrical maintenance is done, make sure that the blower motor is turning clockwise as viewed from the front of the 050 and 075 series tumble dryers and counterclockwise on the F75 tumble dryers. Then set the reverse control switch to "nonreversing" and note that the cylinder turns constantly clockwise as viewed from the front of the tumble dryer. If not, interchange L1 and L2 service leads to the reverse drive motor.

Control Instructions

Dual Digital Timer Control

QT and RQ Control Suffixes

1. Select HIGH, MED, LOW or NO HEAT by turning the temperature knob.

HIGH	Temperature 190°F [88°C]
MED	Temperature 170°F [77°C]
LOW	Temperature 120°F [49°C]

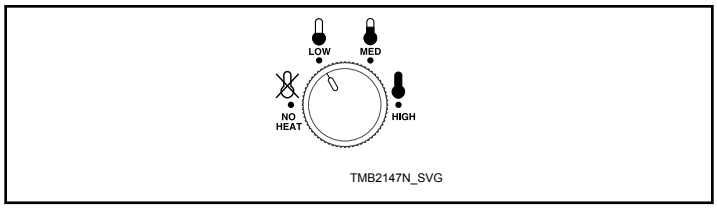

Figure 32

2. Set the HEAT TIME for the number of minutes (from 0 - 60) desired.

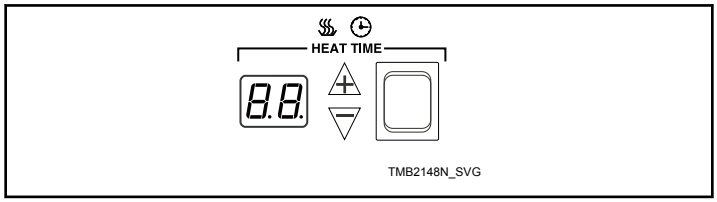

Figure 33

3. Set the COOL DOWN TIME for the number of minutes (from 0 - 15) desired.

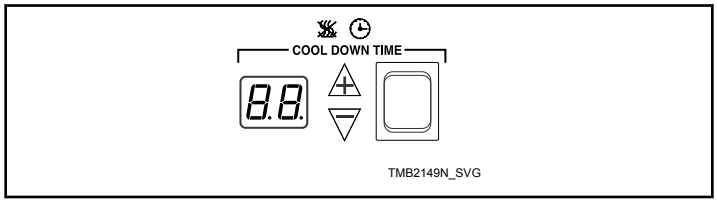

Figure 34

4. Select reversing or nonreversing cylinder rotation setting, if applicable.

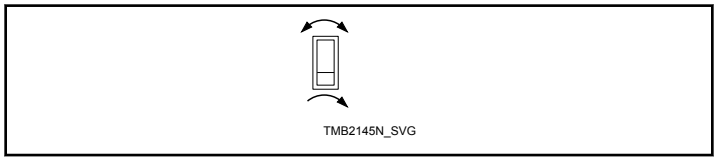

Figure 35

5. Press and release START button to start tumble dryer. Display will show minutes remaining before end of cycle.

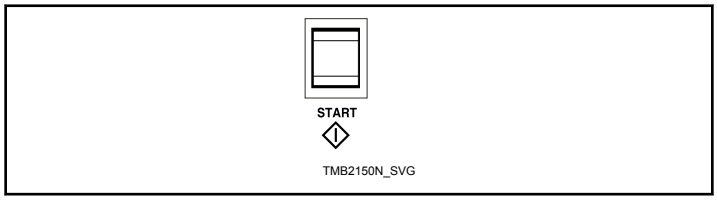

Figure 36

NOTE: One touch drying is available for repetitive loads. If the START button is pressed while the machine is in Idle Mode, when the display is dark, the tumble dryer will repeat the last drying cycle. If the cycle time is adjusted before the cycle is started, the time displayed when the start button was pressed will be used for future cycles.

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IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the START button must be pressed in.

If the load cools to 90°F [32°C] before cool down time expires, the control will flash "Lr" (load ready) in the heat time display. If the door is not opened, the tumble dryer completes the selected cool down time. If the door is opened after reaching "Lr" temperature, the cycle will be terminated.

NOTE: If display shows an error code, refer to Error Codes section.

6. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened. Anti-wrinkle feature will tumble the load without heat for 30 seconds every 2 minutes for 1 hour OR until the loading door is opened.

Error Codes

Display	Definition	Corrective Action
OP	Open thermistor error	• Check thermistor. Replace if inoperative. • Check wiring diagram between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Shorted thermistor error	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
AF - 1	Airflow switch closed when cycle started	• Check airflow switch. Replace if inoperative.
AF - 2	Airflow switch failed to close after cycle started	• Check airflow switch. Replace if inoperative.
AF (Flashing)	Bouncing Airflow Switch	• Check airflow switch to ensure that it is properly aligned and securely mounted in the mounting bracket. • Make sure airflow switch can open and close freely. • Check installation and make sure there is adequate airflow. • Make sure exhaust is not blocked. • Clean the lint screen. • Replace airflow switch if inoperative.
AF (Solid)	Airflow Switch Closed when Resuming Cycle	• Allow up to 20 seconds for this condition to clear. • Check if airflow switch opens at end of cycle. • Replace airflow switch if inoperative.

Table 13

Electronic OPL Micro Control

OM and RM Control Suffixes

1. To use an Automatic Cycle, press an ON/SELECT pad. Select HIGH, MEDIUM, MED LOW, LOW or NO HEAT for items that should not be dried with heat. A light to the left of the selected pad lights up.

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HIGH	Temperature 180°F [82°C]
MEDIUM	Temperature 160°F [71°C]
MED LOW	Temperature 140°F [60°C]
LOW	Temperature 120°F [49°C]

To use a Time Dry or Custom Cycle, refer to the Programming Manual.

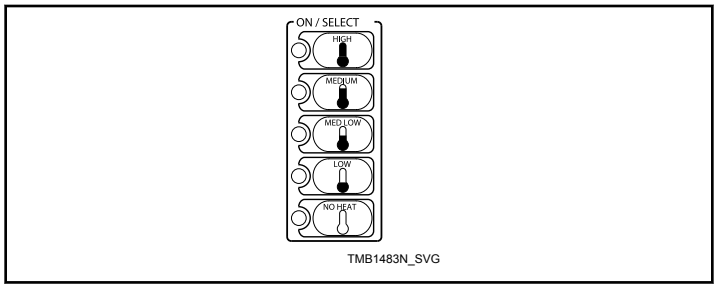

Figure 37

NOTE: Do not press directly on lights or the center of pad. For proper selection, press on pad slightly to the right of center. Refer to *Figure 38* .

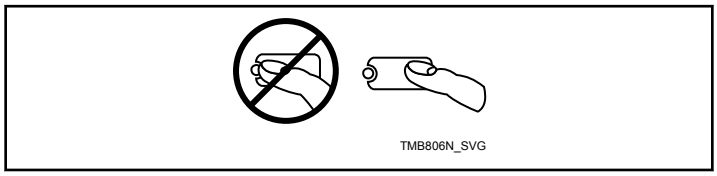

Figure 38

2. Select REVERSING or NONREVERSING cylinder rotation setting.

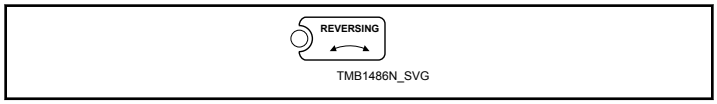

Figure 39

3. Press START pad to start tumble dryer.

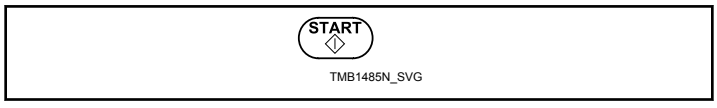

Figure 40

NOTE: All pads can be pressed in any sequence without damaging control or tumble dryer. To stop the tumble dryer at any time, open the door or press STOP/RESET.

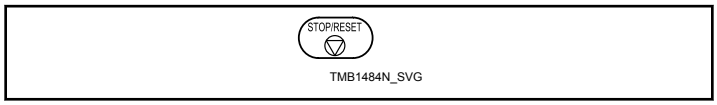

Figure 41

NOTE: The window display will flash. Press STOP/ RESET twice (within three seconds) to end the cycle and reset the control to idle status. To restart the tumble dryer, CLOSE door and press START pad.

IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and START pad must be pressed.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened.

Single Drop Control

SD and SX Control Suffixes

1. Select HIGH, MED, LOW or NO HEAT by turning the temperature knob.

HIGH	Temperature 190°F [88°C]
MED	Temperature 160°F [71°C]
LOW	Temperature 130°F [54°C]

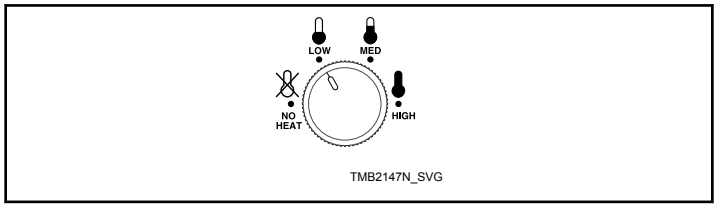

Figure 42

2. Insert the coin(s) in the coin slot.

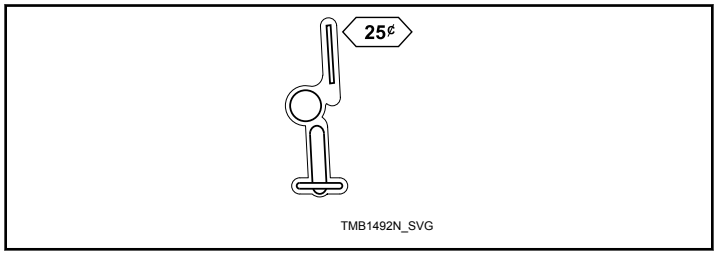

Figure 43

3. Press START button to start tumble dryer.

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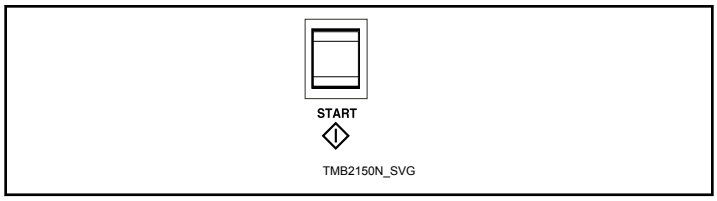

Figure 44

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START button.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an extended tumble feature. Starting 20 minutes after a cycle ends, the cylinder will tumble for two minutes every hour without heat, up to 18 hours or until door is opened.

MDC Coin and Card Control

BB, BC, BG, BK, BL, BW, BX, BY and BZ Control Suffixes

1. Select temperature by pressing the appropriate temperature pad.

HIGH	Temperature 190°F [88°C]
MED	Temperature 180°F [82°C]
LOW	Temperature 160°F [72°C]
DELICATES	Temperature 130°F [54°C]

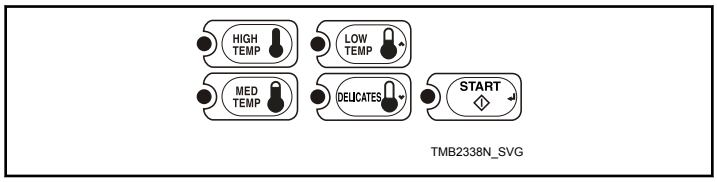

Figure 45

2. Insert the coin(s) in the coin slot, or the card into the opening.

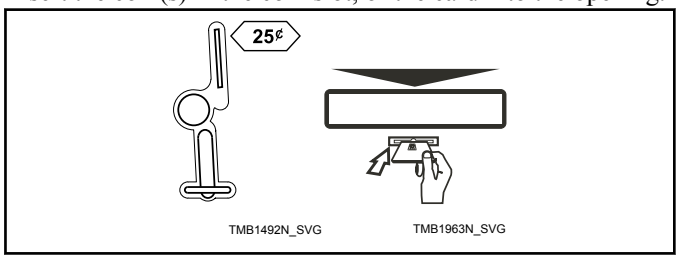

Figure 46

3. Press START pad to start tumble dryer.

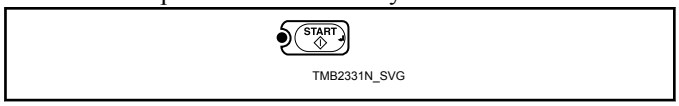

Figure 47

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START pad.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

Quantum Control

LB, LC, LK, LL, LW, LX, LY, LZ, WB, WC, WK, WL, WW, WX, WY and WZ Control Suffixes

1. Select HIGH, MED, LOW, NO HEAT or DELICATES by pressing the appropriate temperature pad.

HIGH	Temperature 190°F [88°C]
MED	Temperature 180°F [82°C]
LOW	Temperature 160°F [72°C]
DELICATES	Temperature 130°F [54°C]

2. Insert the coin(s) in the coin slot or card into the card opening.
3. Press START pad to start tumble dryer.

IMPORTANT: To stop the tumble dryer at any time during a cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START pad.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an extended tumble feature. Starting 20 minutes after a cycle ends, the cylinder will tumble for two minutes every hour without heat, up to 18 hours or until door is opened.

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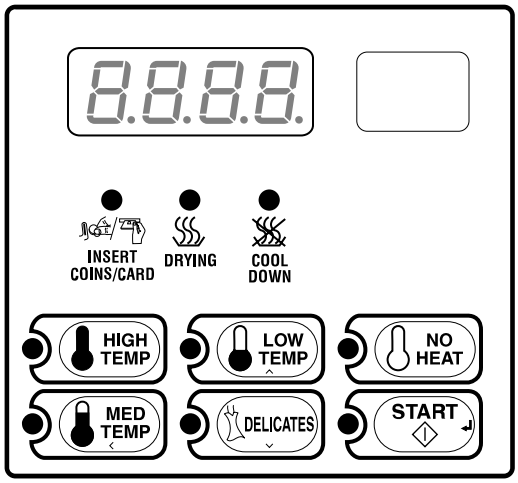

Figure 48

Galaxy 600 Control

KB, KC, KK, KL, KW, KX, KY and KZ Control Suffixes

1. Select HIGH, MED, LOW or DELICATES by pressing the appropriate temperature pad.

HIGH	Temperature 190°F [88°C]
MED	Temperature 180°F [82°C]
LOW	Temperature 160°F [72°C]
DELICATES	Temperature 130°F [54°C]

2. Insert the coin(s) in the coin slot or card into the card opening.
3. Press START pad to start tumble dryer.

   IMPORTANT: To stop the tumble dryer at any time during a cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START pad.

4. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an extended tumble feature. Starting 20 minutes after a cycle ends, the cylinder will tumble for two minutes every hour without heat, up to 18 hours or until door is opened.

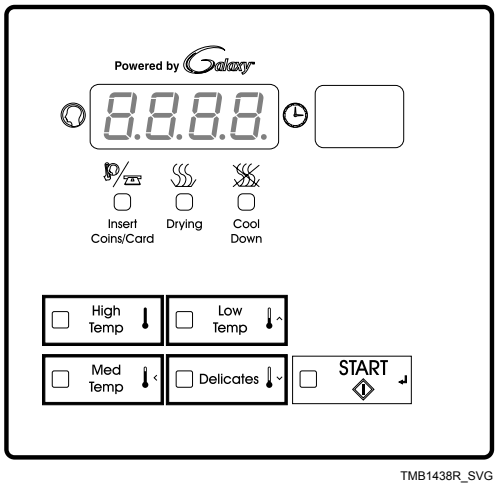

Figure 49

LED OPL Control

EO and RE Control Suffixes

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1. Press the Up or Down keypad to change cycles.
   To customize a cycle, refer to the Programming Manual.
2. Press START (◇/↵) to start selected cycle.
   IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the START (◇/↵) pad must be pressed.
3. When the cycle is complete, open door and remove laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened. After an hour the machine enters delayed tumble and will tumble for two minutes every hour for up to 18 hours or until the door is opened.

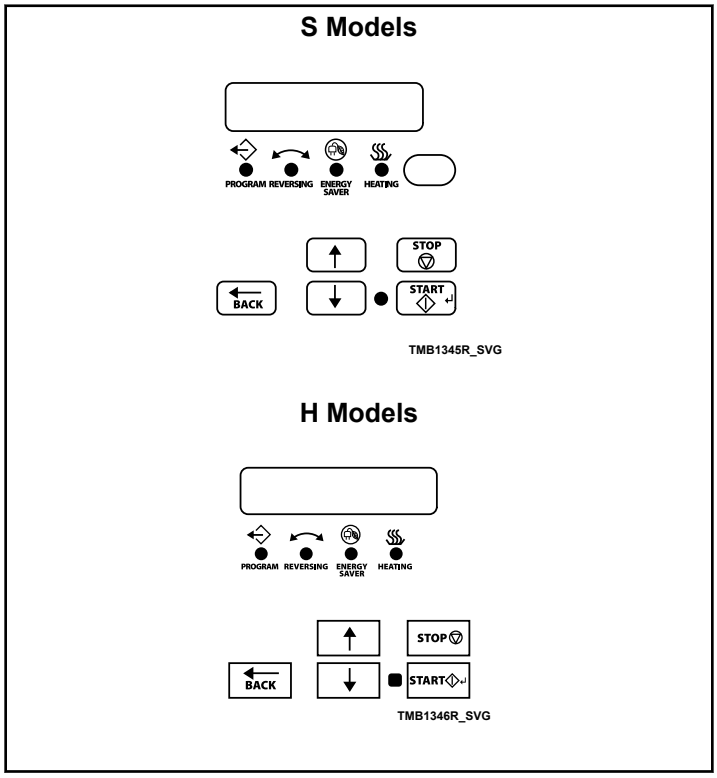

Figure 50

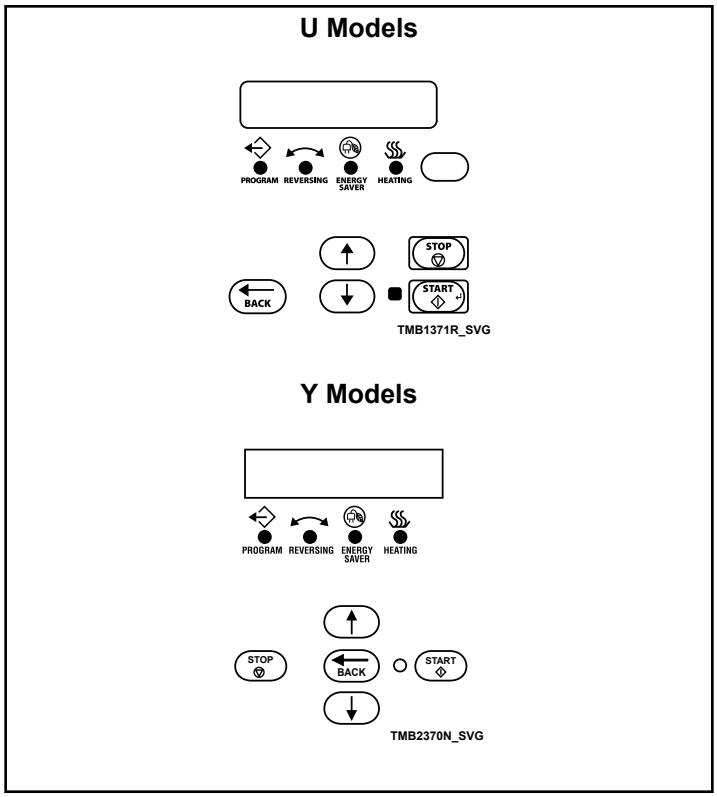

Figure 51

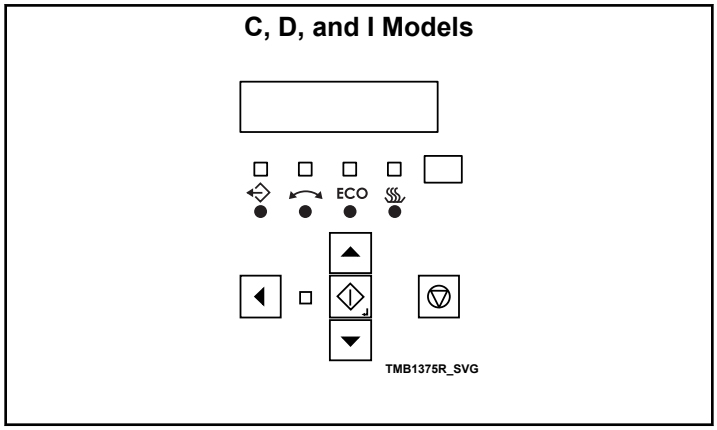

Figure 52

UniLinc Control

UO and RU Control Suffixes

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1. Press the ← or → keypad to change cycles. The center highlighted position is the selected cycle.

   To customize a cycle, refer to the Programming Manual.

2. Press START to start selected cycle.

   IMPORTANT: If the loading door or lint panel door is opened during the cycle, the heating system will shut off and the motor will stop. To restart the cycle, both doors must be closed and the START pad must be pressed.

3. When the cycle is complete, open door and remove laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

NOTE: This machine includes an anti-wrinkle/ extended tumble feature. After the drying cycle is complete, the cylinder will tumble without heat every few minutes. The intermittent tumbling will continue for one hour or until the door is opened. After an hour the machine enters delayed tumble and will tumble for two minutes every hour for up to 18 hours or until the door is opened.

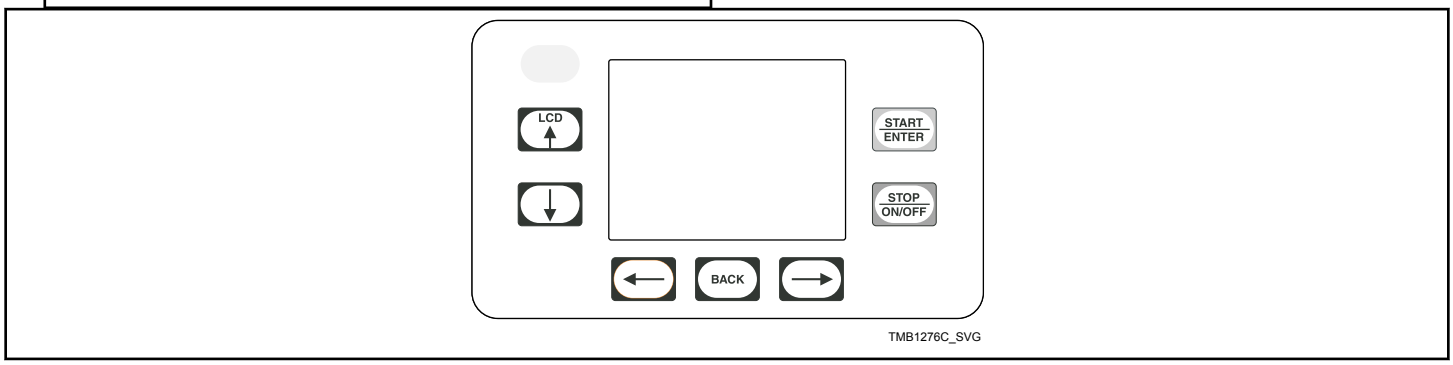

Figure 53

DX4 Coin Control

3B, 3K, 3L, 3V, 3W and 3X Control Suffixes

1. Open door and fill drum with clothes.
2. Close door.
3. Insert the coin(s) in the coin slot.
4. Press and release one of the cycle buttons to select a cycle and start the tumble dryer. Refer to *Table 14* .

To use a custom cycle, refer to the Programming Manual.

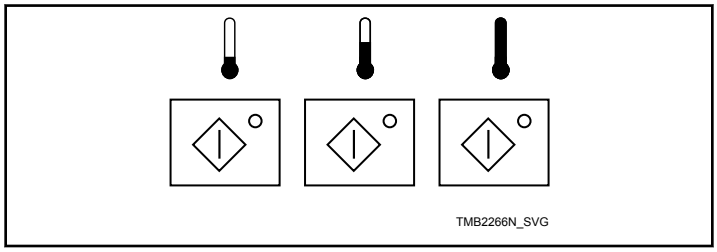

Figure 54

	Temperature	Drying Time	Cool Down Time
Left Button	104°F [40°C]	Varies	2 min.
Middle Button	140°F [60°C]	Varies	2 min.
Right Button	176°F [80°C]	Varies	2 min.

Table 14

NOTE: Drying times will be dependent on the number of coins that are inserted in the coin slot.

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START button.

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5. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

DX4 OPL Control

3O and R3 Control Suffixes

1. Open door and fill drum with clothes.
2. Press and release one of the cycle buttons to select a cycle and start the tumble dryer. Refer to *Table 15* .

To use a custom cycle, refer to the Programming Manual.

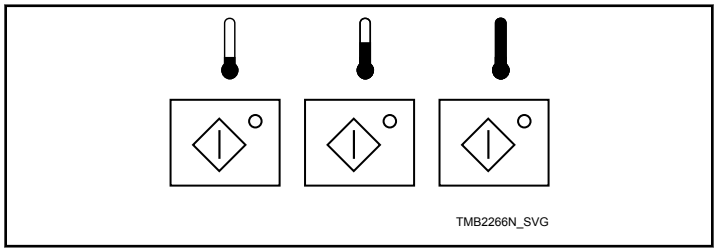

Figure 55

	Temperature	Drying Time	Cool Down Time
Left Button	104°F [40°C]	30 min.	2 min.
Middle Button	140°F [60°C]	30 min.	2 min.
Right Button	176°F [80°C]	35 min.	2 min.

Table 15

IMPORTANT: To stop the tumble dryer at any time during the cycle, OPEN DOOR. To restart the tumble dryer, CLOSE door and press START button.

3. When the cycle is complete, open door and remove the laundry.

WARNING

To prevent the risk of fire, remove laundry immediately in case of power failure.

W779

Diagnostic Microprocessor Control

General Operation

The Diagnostic Microprocessor Control (DMP) is designed to manage the drying and cooling cycles of the tumble dryer. The controller is also programmed from the factory with five different default programs as described below. The operator has the flexibility to select the time for the drying and the cool down cycles and the drying temperature. The operator may also select either reversing or nonreversing basket action only if the tumble dryer is equipped for reversing. The operator may also reprogram the default programs. See Programming.

Default Programs	Dry Time (Min.)	Cool Time (Min.)	Temp. Set Point	Reversing
1 – Towels	40	5	185º/195ºF [85º/91ºC]	No
2 – Sheets	30	5	165ºF [74ºC]	Yes
3 – Misc-1	30	5	150ºF [66ºC]	No
4 – Misc-2	25	5	135ºF [57ºC]	Yes
5 – Extra Dry	5	2	150ºF [66ºC]	No

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NOTE: If an altered program is determined to be corrupted, the default program settings will be used.

Features

- Drying time: 0-60 minutes
- Cooling time: 2-60 minutes
- LED display of cycle time, set temperature, and actual temperature
- Thermistor controlled temperature
- Safety tumble cycle
- Buzzer for end of cycle, audible alarm
- Reversing/Nonreversing selection
- Five user programmable programs
- RPM display – when equipped with rotational sensor only
- Monitors the lint door switch operation
- Monitors the thermistor for operation

The minimum drying time is 0 minutes, and the minimum cooling time is 2 minutes. The maximum drying or cooling time is 60 minutes. The drying temperature may be set from 100ºF [38ºC] to 185º/195ºF [85º/91ºC]. The drying time, cooling time, or temperature may be modified during an operating cycle.

If it is necessary to reset the drying and cooling times for the current cycle, press STOP once to stop the tumble dryer. Press STOP again to cancel the cycle.

If it is necessary to change programs during a current cycle, press STOP once to stop the tumble dryer and press STOP again to cancel the current cycle.

Programming

1. Set DIP switch #8 to the ON position.
2. Select the desired program number to change. The LED should be flashing.
3. Select DRY TIME. Set the time with the Up/Down arrows.
4. Select COOL TIME. Set the time with the Up/Down arrows.
5. Select TEMPERATURE. Set the temperature with the Up/Down arrows.
6. Select reversing REV (illuminated) or nonreversing REV (not illuminated). To change basket direction and dwell time, see Reversing Operation.
7. Press and hold the Program Select button about 3 seconds until the LED stops flashing. The selected program number is now programmed. If the Program button is pressed for less than 3 seconds, the controller will cancel the program and display the next program's settings. If not programmed correctly, the display will flash "E2F" for 4 seconds, and the default settings will be used. Follow steps 4 through 7 to reprogram any program number. When finished, set DIP switch #8 to OFF. The programs are now stored.
8. During the Program Mode, if the Up/Down arrows, REV, or Display button is not pressed within 10 seconds, the default program settings will be used.
9. Temporary Reprogramming of Current Programs (OPL ONLY).
10. The Drying Time, Cooling Time, Temperature, and Reversing Mode of a program currently in use may be modified simply by adjusting any or all of the program parameters for that program, as needed. Once a modification has been made, the current program LED will flash indicating that it has been modified.
11. Use the Up/Down arrows to adjust program time.
12. Use the Display Select button to choose between Drying Time, Cooling Time, and Temperature. Then use the Up/Down arrows to adjust the times and temperature.
13. Toggle between reversing REV (illuminated) or nonreversing REV (not illuminated). (Only for tumble dryers with the reversing option.)
14. To cancel this temporary programming mode push the STOP button once to stop the current cycle and once more to cancel the modified program settings. The program will revert back to its original settings.

Reversing Operation

1. When the LOCAL reversing operation is selected, the reversing times are stored in the EEPROM which is located on the controller board. If the values stored are determined to be invalid, the clockwise and counterclockwise times will default to 60 seconds, and the dwell time will default to 4 seconds.
2. The reversing time program has the following sequence: (1) clockwise time, (2) dwell time and (3) counterclockwise time.
3. To program new reversing times DIP switches #3 and #8 must be on.
4. Press and hold the reverse button (REV) for 3 seconds to display the clockwise time.
5. Use the Up/Down arrows to set the clockwise time within the range of 30-120 seconds.
6. Press REV to display the dwell time.
7. Use the Up/Down arrows to change the dwell time within the range of 3-10 seconds.
8. Press the REV button to display the counterclockwise time.
9. Use the Up/Down arrows to change the counterclockwise time within the range of 30-120 seconds.
10. Press the REV button to save these settings and leave DIP switch #3 in the ON position and flip DIP switch #8 to the OFF position.

When the DMP controller is retrofitted to an existing tumble dryer with the reversing feature, off board reversing will be required and DIP switch #3 on the DMP must be in the OFF position and the DMP must be connected to the Reversing Timer Board for proper operation. The DMP settings for clockwise, dwell, and counterclockwise times are no longer valid when used with the Reversing Board. Instead these settings are made on the Reversing Timer Board.

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Rotation Sensor

The rotation sensor must “read” the key on the basket shaft or pulley. The sensor must be set approximately 1/4 inch from the key or pulley. Look for the light on the sensor to come on as the key passes the sensor; this is a correctly operating sensor. If no light appears, either the sensor is out of range or the key/pulley or the sensor is bad. In addition, if the light stays on continuously, then the sensor is too close to the component or the sensor is bad.

Safety Tumble/Anti-Wrinkle

At the end of the cool down cycle, the tumble dryer will stop and display “END.” The DMP control will automatically rotate the basket for 5 seconds every 2 minutes for a total of 20 minutes, until some function of the tumble dryer is activated/deactivated by the user.

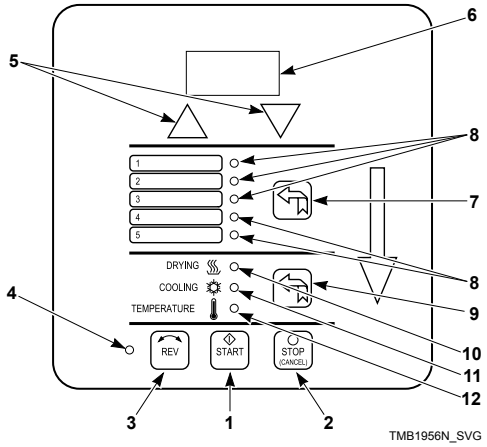
Operational Check for the Board Diagnostics

1. “dor” indicates that the loading or lint door is open.
2. Cycle the tumble dryer to check if the buzzer activates.
3. “P-F” indicates that the thermistor is short circuited or open circuited.
4. “bbt” indicates a broken belt condition or a faulty rotation sensor. (Only available on tumble dryers with the rotation sensor.)
5. Hold the START button to display the drum RPM’s; the display will read “r##” where ## are the RPM’s. (Only available on tumble dryers with the rotation sensor.)

DMP OPL Models

DO and RD Control Suffix

Description of the OPL Control Panel



1. START. Starts or resumes the current program or cycle.
2. STOP. Temporarily halts the current cycle or cancels the current program.
3. Reversing/Nonreversing (REV). Changes the selection between reversing and nonreversing cylinder action.
4. Reversing LED. Illuminated when set for reversing.
5. Up/Down Arrows. Increases or decreases the value in the display. In conjunction with the DISPLAY button, these buttons are used to adjust the drying time, cooling time, temperature, clockwise time, dwell time, counter-clockwise time, and minutes per coin (Coin only).
6. Display. Displays the drying time, cooling time, drying temperature and diagnostic codes.
7. Program Select. This button toggles through the five user programmable programs. Holding this button will save a program, as indicated in Programming.
8. User Program LEDs. Illumination shows which user program is currently being displayed.
9. Display Select. Toggles the display between the drying time, cooling time, and temperature settings. Pressing the Display button for 3 seconds allows the user to display the drying cycle temperature.
10. DRYING LED. Illuminated when in the drying cycle.
11. COOLING LED. Illuminated when in the cooling cycle, or when the display is currently showing the time for the cooling cycle.
12. TEMPERATURE LED. Illuminated when the display is showing the temperature setting.

Figure 56

The DMP has an 8 position DIP switch bank that is accessible from the back of the control board. By switching these DIP switches, it is possible for the operator to customize the display and some of the operating features of the tumble dryer.

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Function	OPL	Coin				
1	Tumble dryer Type	OFF	ON	OPL=Off; Coin=On		
2	Temperature Units	OFF	OFF	ºF=Off; ºC=On		
3	Local/Remote Reversing	ON	ON	Local=On; Remote=Off		
4	Empty	ON	ON	Always ON		
5	Empty	ON	ON	Always ON		
6	Buzzer Timer	ON	ON	5 Sec=Off; Continuous=On		
7	Safety Tumble (OPL) or Coin Count/Pay (Coin)	ON	OFF	#1	#7	DIP SWITCH
				OFF	ON	SAFETY TUMBLE
				OFF	OFF	NO SAFETY TUMBLE
				ON	ON	COIN COUNT
				ON	OFF	PAY
8	Programming	OFF	OFF	Disable=Off; Enable=On		

DIP Switch Functions Explained

1. Tumble dryer Type: This DIP switch selects the type of tumble dryer, i.e., OPL or Coin.
2. Temperature Units: Selects ºF or ºC for the temperature display. Factory setting is for ºF.
3. Local/Remote Reversing: Preset at the factory; usually for local reversing. Remote reversing for use with Reversing Timer Board only.
4. Empty: Preset at the factory; always ON.
5. Empty: Preset at the factory; always ON.
6. Buzzer Timer: This DIP switch determines the length of time that the end of cycle buzzer will remain on. “OFF” indicates that the buzzer will sound for 5 seconds when the drying cycle is completed. “ON” indicates that the buzzer will sound continuously until the STOP button is pressed or the loading door is opened.
7. Safety Tumble (OPL) or Coin count/Pay (Coin): If DIP switch #1 is set for OPL, then DIP switch #7 in the ON position enables the safety tumble. If DIP switch #1 is set for Coin, then DIP switch #7 in the ON position enables the display of the coin count. DIP switch #7 in the OFF position enables the display of “PAy”, to indicate that coins are needed to run the tumble dryer.
8. Programming: This switch enables or disables the programming feature and should normally be in the OFF position.

DMP Coin

DV and DX Control Suffixes

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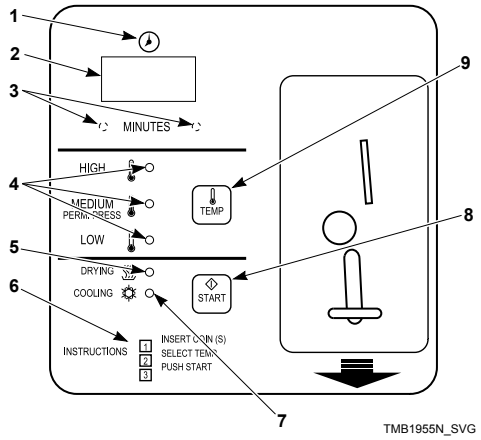
Description of The Coin Control Panel



1. Clock Symbol. This symbol of a clock indicates that the time in the display is counting down to zero.
2. Display. Displays the drying time, cooling time, drying temperature, and diagnostics.
3. Hidden Keys. Used for programming in the coin mode – increases or decreases the value in the display. In conjunction with the START button, these buttons are used to adjust the drying time, cooling time, temperature, clockwise time, dwell time, counterclockwise time, and minutes per coin.
4. Temperature LEDs. Indicate temperature setting.
5. DRYING LED. Illuminated when in the drying cycle.
6. Instructions. Instructions to start a drying cycle.
7. COOLING LED. Illuminated when in the cooling cycle or when the display is currently showing the time for the cooling cycle.
8. START. Starts or resumes the current program or cycle.
9. Temperature Select. This button toggles through the three temperature selections.

Figure 57

Coin Keypad Interface

- START button to start or resume a cycle.

- TEMP button to select HIGH, MEDIUM, or LOW temperature.

- Two hidden buttons to increment or decrement the programmable time and temperature options.

Power-Up

Upon applying power to the tumble dryer, the display will show "PAy" and the DRYING and COOLING LEDs will be off until coins are deposited to increase the tumble dryer run time. When time is displayed, the default (LOW) temperature setting LED will be on until a different temperature setting is selected.

Power Failure

If a power loss occurs during operation, a cycle will not resume until the START button is pressed. To cancel the remaining cycle, press the internal CLEAR button.

Coin Operation

The tumble dryer run time is determined by the pre-programmed run time per coin and the number of coins deposited into the tumble dryer. The maximum time that can be accumulated and displayed is 99 minutes. The drying time is the difference between the run time and the cooling time. The cooling time is pre-programmed to be 2 to 5 minutes. The drying temperature can be selected from LOW, MEDIUM, or HIGH temperature settings by pressing the TEMP button.

Coin Programming

The Coin board programming mode can only be entered when "PAy" is displayed. DIP switch #7 must be in the off position.

Programming is enabled by setting DIP switch #8 to the ON position.

The programming mode is entered by pressing and holding the CLEAR button for three seconds.

The programming follows the following parameter order:

1. Tumble dryer run time per coin (DRYING), COOLING time, HIGH temperature setpoint, MEDIUM temperature setpoint, LOW temperature setpoint.
2. An LED will be on to indicate which parameter is flashing on the display.
3. The hidden front panel increment and decrement keys are used to change the value.
4. The CLEAR button is used to recall the default value.
5. The START button is used to step to the next parameter.
6. After the last parameter, "End" will be flashing.
7. Press the START button one last time to store the settings and exit the program mode.
8. "PAy" will be displayed.
9. If it is determined that the data did not program correctly, the error message "E2F" will flash for 4 seconds, and then the default coin parameters will be used.

The tumble dryer run time per coin is programmable for 1 to 20 minutes with the default preset to 10 minutes.

The cooling run time is programmable from 2 to 5 minutes with the default preset to 2 minutes.

The three temperatures setpoints are programmable for 100ºF [38ºC] to 185º/195ºF [85º/90ºC] with the following default settings:

- HIGH equal to 185ºF [85ºC]

- MEDIUM equal to 150ºF [66ºC]

- LOW equal to 135ºF [57ºC]

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Stop

When in the Coin mode, the tumble dryer will stop if the tumble dryer door is opened while the tumble dryer is running. If the CLEAR button, located behind the board, is pressed, the tumble dryer will stop, the tumble dryer time will be zeroed and the display will show “PAy”.

Coin Count

The unit will count the number of coins deposited.

Setting DIP switch #7 to the ON position will display the coin count since it was the last reset.

To reset the count, press the CLEAR button and “00” will be displayed.

If the coin count is greater than “999”, the display will flash “999”.

Setting DIP switch #7 to the OFF position will return the display to “PAy”.

Ignition Control Operation and Troubleshooting for Models Starting 3/11/13

WARNING

70458601 and 70458701 controls cannot be serviced by the user. If any control failures are detected, the controls must be replaced by qualified service personnel. Risk of explosion or fire can result if the control module has been opened or with any attempts to repair it and the warranty is void.

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Before troubleshooting the system, check the following items:

- Verify all mechanical and electrical connections are secure and tight.

- Verify all system wiring is correct.

- Verify there is a proper system ground. The igniter, flame sensor and igniter module must share a common ground with the burner. Nuisance shutdowns are often caused by a poor or erratic ground.

- Verify that the system is powered and that the control is calling for heat.

- If the control proceeds to an error code on the red diagnostic LED, troubleshoot per the Fault conditions table below:

Fault Conditions

LED Indication	Fault Mode
Off	Normal Operation
1 Flash	At Power Up
2 Flashes	Flame Without Call For Heat
3 Flashes	Ignition Lockout
4 Flashes (70458701 only)	Manual Reset Error
Steady On	Internal Control Failure

NOTE: The LED will flash on for 1/4 second, then off for 1/4 second during a fault condition. The pause between fault codes is 3 seconds.

Internal Control Failure

If the control detects an error in its software or hardware, all outputs are turned off and the red LED displays a steady ON condition. If this condition persists after an attempt to restart, then the control must be replaced.

Troubleshooting

Troubleshooting Guide

Symptom	Probable Cause
Control in Lockout Mode (70458701 Control Only)	Manual reset of the control is needed. Reset by pushing red lockout button or use front end control.
Control does not start, green LED is off	1. 24 VAC present between 24V and ground on 70458701 only. If not, see machine schematic. 2. 24 VAC present between TH and ground. If not, see machine schematic.

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Troubleshooting Guide	
Thermostat on, no spark or valve	1. Cable connects to control and electrode. Voltage present at gas valve. 2. Bad control. Check red LED for steady on or flashing codes.
Valve on, no spark during TFI	1. Shorted electrode. 2. Spark gap not correct. Set to .094-.156 inch. 3. High voltage cable is faulty or has a poor connection. 4. Control failure.
Spark on, no flame	1. Is gas on? 2. 24 VAC at gas valve. 3. Bad control. Check voltage between gas valve terminal MV and GND on control.
Flame okay during TFI, no flame sense after TFI	1. Check electrode position and cleanliness. 2. Check high voltage wire. 3. Poor ground at burner. 4. Poor flame, check flame current.
Reset failure	1. Reset switch was pressed too long. Try to reset again. 2. Reset switch is shorted. Replace switch.

Proper Electrode Location

Proper location of the electrode assembly is important for optimal system performance. The electrode assembly should be located so that the tips are inside the flame envelope and about 1/2 inch [1.2 cm] above the base of the flame. Refer to *Figure 58* .

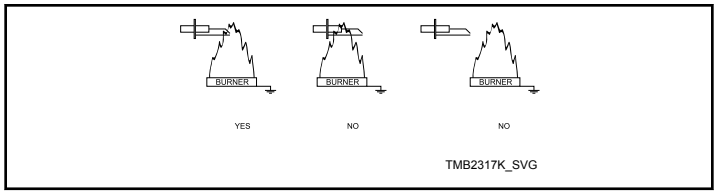

Figure 58

Flame Current Measurement

Flame current is the current that passes through the flame from sensor to ground. To measure flame current, connect a True RMS or analog DC micro-ammeter to the FC+ and the FC- terminals. The reading should be 1.0 micro-amps DC or higher. If the meter reads negative or below “0” on the scale, the meter leads are reversed. Re-connect leads with proper polarity.

Alternately, a Digital Voltmeter may be used to measure the DC voltage between the FC+ and FC- terminals. Each micro-amp of flame current produces 1.0 VDC, so a reading of 2.6 VDC would equate to 2.6 micro-amps.

A good burner ground that matches the control ground is critical for reliable flame sensing.

Ignition Control Operation for Non-CE Models Through 3/10/13

Power Up

When power is applied to the ignition control, the control will begin the ignition sequence within 1 – 3 seconds prepurge waiting time.

Ignition Sequence

The control begins the ignition sequence after prepurge by powering the ignitor and opening the gas valve. The ignitor will remain on either until a flame is sensed or until a maximum of ten (10) seconds(10 +0/-4 sec) has elapsed. If a flame is established and lost during the 10 second period, the ignitor will be powered up again in an attempt to re-ignite the gas.

If no flame is detected within the ten (10) second ignition sequence, the control will terminate power to the gas valves, ignitor, and enter lockout within 5 seconds.

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Normal Operation

Once a flame has been established, the spark ignitor will stop sparking and the control will continually monitor all inputs. If the controller senses a loss of flame after flame is established, the gas valve will remain energized and sparking will commence within one second of the flame loss. If flame reattempt fails, lockout will occur within 11 seconds of initial flame loss.

Termination of Flame

Normal flame termination occurs when the thermostat has been satisfied, meaning there is no immediate need for more heat. The thermostat will disconnect power from the ignition control, which will cause the gas valve to close and the flame to go out. After a short period of time, not less than 1 second, the thermostat will cool down and close causing power to be reapplied to the ignition control. When this occurs, the control must complete the same prepurge and ignition sequence specified above.

Control Lockout

When the control locks out, the gas valve will be closed and all requests for heat will be ignored. The lockout mode may only be discontinued by interrupting power to the control or cycling the thermostat. After this occurs, the control will restart with its normal power up and ignition sequence.

Low Voltage Detection

The control will have capability for detection of a low voltage input condition. If input voltage on power up is below 19.0VAC +0.8VAC/-0.5VAC, the control will disable output to gas valve control relay. If input voltage rises above 19.8VAC for at least three (3) seconds, the control will then re-enable function of the gas valve control relay and ignition sequence may begin. On powerup, the control function must always be disabled if greater than 19.8VAC.

Ignition Control Operation for CE Models Through 3/10/13

Power Up

After 24VAC is applied to the ignition control pins 24V and GND, the Diagnostic LED on the ignition control will turn orange/yellow. If a fault is detected the ignition control will enter Lockout Mode. If no faults are detected, the Diagnostic LED will turn Green and the ignition control will enter Standby Mode.

Standby Mode

While in Standby Mode, the ignition control will continually monitor the system for faults. Once 24VAC is applied to terminals TH and GND on the control, the ignition control will enter Start Up Mode.

Start Up Mode

During Start Up Mode, the ignition control will monitor the system for faults and begin the ignition sequence. If no faults are present, the ignition control will begin the ignition sequence by entering an 18 second waiting period. During this time the Green LED on the ignition control will switch between Red and Green, before maintaining a Green color.

After the waiting period, the ignition control will turn on the igniter and gas valve. The igniter will remain on until a flame is sensed, or up to 10 seconds.

Once a flame has been sensed the ignition control will stop sparking, the gas valve will remain on and ignition control will enter Run Mode.

If a flame is not sensed, the ignition control will then begin two additional retrials for ignition. The ignition control will re-enter the 18 seconds waiting period before the ignition control makes another attempt at ignition. If the three attempts at ignition fail, the ignition control will enter Lockout Mode.

Run Mode

While in Run Mode the ignition control leaves the gas valve on, monitors the flame signal, and leaves the igniter off.

If a flame signal is lost during Run Mode, one additional retrial for ignition will take place within one second. The ignition control will restore the spark for approximately 10 seconds. If the ignition re-attempt fails, the ignition control will enter Lockout Mode.

The ignition control will remain in Run Mode until 24VAC is removed from terminals TH and GND on the control.

Termination of Flame

The flame will go out when power is removed from ignition control. The ignition control will turn off the gas valve and enter Standby Mode.

Lockout Mode

When Lockout Mode is entered, the ignition control will remove power to the gas valve, the igniter will turn off, the Lockout/Reset Light will turn on, and the Diagnostic LED will display the appropriate Error Code.

Lockout Manual Reset

Lockout Mode is cleared by pressing an external reset switch for three seconds. The ignition control will clear all error codes and enter Standby Mode. During Lockout Manual Reset, the Diagnostic LED on the ignition control flashes red and orange, and the Reset Light remains on until the ignition control is reset. After the Reset Light turns off, stop pressing the switch. Holding the reset for three seconds after lockout has been cleared will cause a fault and result in entering Lockout Mode again.

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System Tests

The following system tests are performed during normal operation. System tests are performed at a minimum of every 24 hours.

Low Voltage Detection

If the voltage between terminals TH and GND on the control is below 18.75VAC +/- 0.75VAC for more than 3 seconds the ignition control will turn off the gas valve and will not attempt to spark. The Diagnostic LED will display Error Code 5. The ignition control will not enter Lockout Mode if a low voltage condition is detected, but will enter Standby Mode and wait for the low voltage condition to be cleared.

If the voltage between terminals TH and GND on the control rises above 19.75VAC +/- 0.1VAC for at least 3 seconds, the ignition control will then enter Start Up Mode.

Low Voltage Detection test is disabled during Run Mode.

Gas Valve

The ignition control verifies that the gas valve is connected. Failure of this test results in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 2.

Flame Probe Tests

The Unexpected Presence of Flame test is performed when no flame is expected. Failure of this test results in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 3.

During the Flame Monitoring test, the flame is checked to ensure the gas is being burned when the gas valve is on. Failure of this test will result in the ignition control entering Lockout Mode with the Diagnostic LED displaying Error Code 3.

Diagnostic LED (DGN LED)/Error Codes

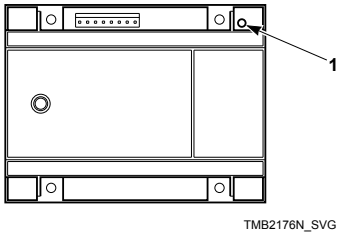
The Diagnostic LED or DGN LED is located by the power connector on the ignition control. Refer to *Figure 59* . The Diagnostic LED will indicate the status of the ignition control. Refer to *Table 16* .

LED Color	Description
Orange-Yellow	Initialization
Green	Standby/Normal Operation
Red	Fault Indication Code

Table 16

The Diagnostic LED will flash error codes one half second on and one half second off. Error codes are separated by a one second pause before the code is repeated.

Error Code	DGN LED status	Fault Type
1	Red	Ignition Control Internal Failure
2	2 Red Flashes	Gas Valve Not Connected
3	3 Red Flashes	Ignition/Flame Sense Failure
4	4 Red Flashes	Reset Switch is Shorted
5	Slow Red and Green Flashes	Low Voltage Detection
6	Fast Red and Orange Flashes	Ignition Control is in Reset Delay



1. Diagnostic (DGN) LED

Figure 59

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Adjustments

Adjustments

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/ panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

Gas Burner Air Shutter

NOTE: Air inlet shutters on the burner must be adjusted so sufficient air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutters be sure that all lint is removed from lint compartments and lint screen.

Air shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of primary air supplied to the burner while closing the shutter decreases the primary air supply. Adjust air shutter as follows:

Refer to *Figure 61* .

1. Open the access panel and remove the burner inspection hole plate.

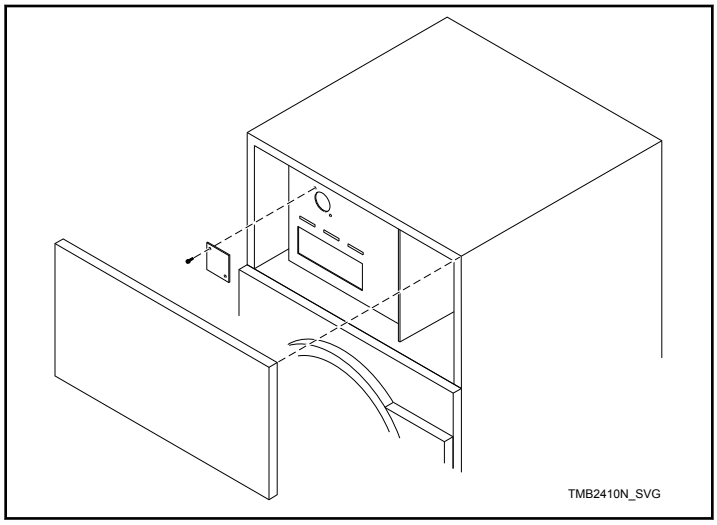

Figure 60

2. Start the tumble dryer and check the flame pattern. If the flame pattern is straight up, insufficient air is flowing through the tumble dryer. A flame pattern that flares to the right and left indicates no air is flowing through the tumble dryer. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the right of the heater section. Too little air is indicated if the flame if yellow, lazy and smokey.
3. To adjust the air shutter, loosen air inlet shutter adjusting screw.
4. Open or close air shutter as necessary to obtain proper flame intensity.
5. After air shutter is adjusted for proper flame, tighten air shutter adjusting screw securely.

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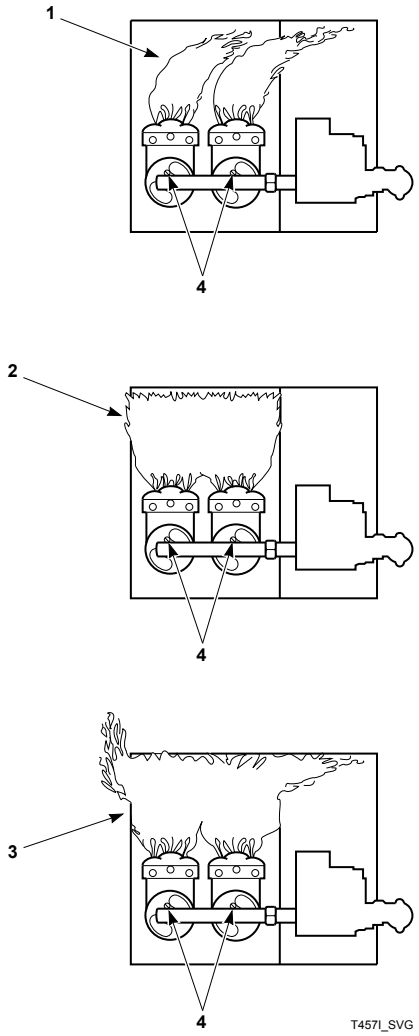

1. Proper Airflow
2. Insufficient Airflow
3. No Airflow
4. Air Shutter Adjusting Screw

Figure 61

Airflow Switch

The airflow switch is set at the factory for proper operation. No adjustment necessary.

The airflow switch operation may be affected by shipping tape still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked and the required corrective action taken.

WARNING

The tumble dryer must not be operated if the airflow switch does not operate properly. Faulty airflow switch operation may cause an explosive gas mixture to collect in the tumble dryer.

W072R1

IMPORTANT: Airflow switch vane must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumble dryer. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is indicating insufficient airflow.

NOTE: To properly mount the airflow switch bracket, or in case of a load not drying, the airflow switch bracket may need to be checked for proper alignment. Be sure the locator pins are securely in their respective holes before tightening the bracket mounting screws. This will assure proper alignment of the airflow switch arm in the channel of the airflow switch bracket and prevent binding of the arm.

Loading Door Switch

The door switch should be adjusted so the cylinder stops when door is opened 2 inches [51 mm] plus or minus 0.25 inch [6 mm]. This switch is a normally open switch and is closed by the hinge cam when the door is closed. If adjustment is required, refer to *Figure 62* and proceed as follows:

1. Close door and start tumble dryer, slowly open loading door. Cylinder and heat system should shut off when door is open 2 inches [51 mm] plus or minus 0.25 inch [6 mm].
2. Slowly close the loading door. When door is 2 inches [51 mm] from being fully closed, the door switch actuating bracket (located on the door) should depress the button and the switch arm with an audible “click.”
3. If the actuating bracket does not operate the switch at the appropriate door closure, bend the actuating switch arm in or out to achieve proper actuation.

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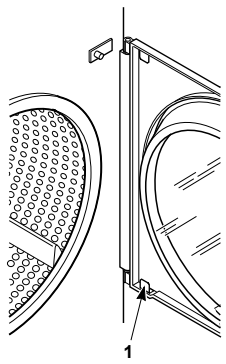


1. Switch Actuator

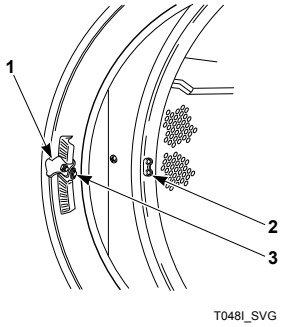
Figure 62

Loading Door Catch

The door catch must be adjusted to have sufficient tension to hold loading door closed against force of load tumbling against it. Proper adjustment is when 7-15 pounds [0.48-1.03 bar] pull is required to open door.

If adjustment is required, refer to *Figure 63* and proceed as follows:

1. Open door.
2. Loosen acorn nut.
3. Turn door strike screw in or out as required.
4. Tighten acorn nut.

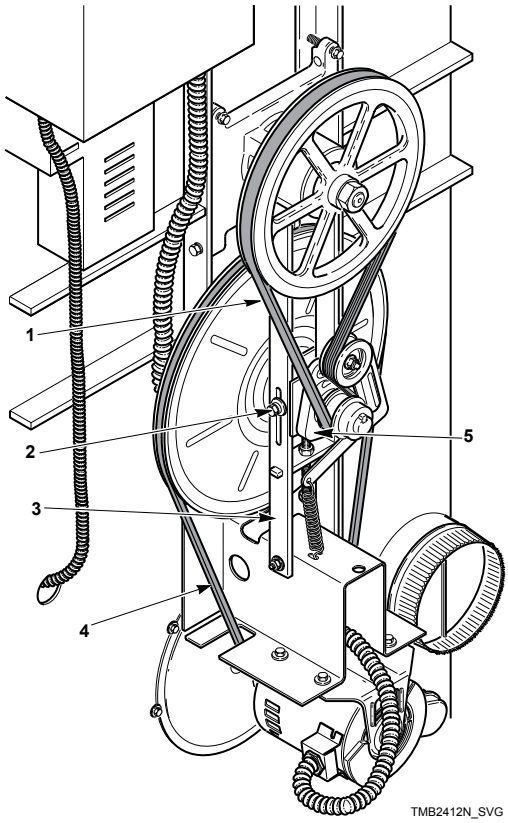


1. Door Latch
2. Door Catch
3. Acorn Nut

Figure 63

Drive Belt - Nonreversing Models

1. Remove guard from rear of tumble dryer.
2. To adjust belt tension, loosen idler housing bolts holding idler housing assembly to the guide rails.
3. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.
4. Replace the guard on rear of tumble dryer.



1. Poly V-Belt (Self-Adjusting)
2. Idler Housing Bolts (2)
3. Adjusting Bolt
4. Drive V-Belt
5. Idler Housing Assembly

Figure 64

Drive Belt - Reversing Models

Refer to *Figure 65* .

Proper tension is when the drive belt can be depressed approximately 0.5 inch [13 mm] by applying light thumb pressure [approximately 5 pounds [0.35 bar]] at a point midway between the sheave and motor pulley.

Proper tension is when each cylinder belt can be depressed approximately 0.19 inch [5 mm] by applying light thumb pressure [approximately 5 pounds [0.35 bar]] at a point midway between the sheave and the idler.

1. Remove guard from rear of tumble dryer.
2. To adjust cylinder belt tension, loosen idler housing bolts holding idler housing assembly to the guide rails.
3. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.

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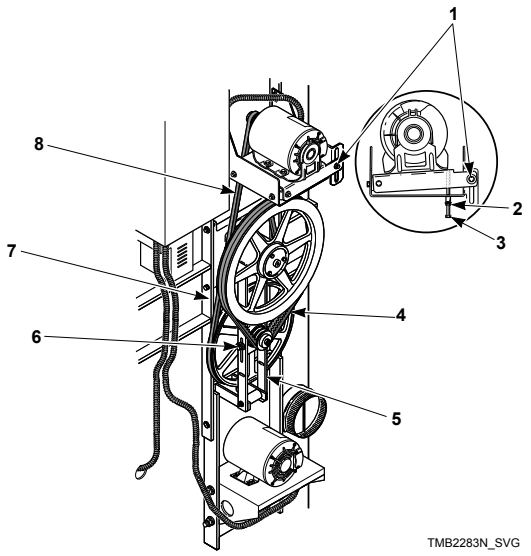
NOTE: Adjusting the cylinder belt tension will change the drive tension. Drive belt tension must also be adjusted.

4. Loosen the locking bolt.
5. Loosen the adjusting nut and use the adjusting screw to move the motor up or down.
6. Once proper belt tension is reached, retighten the adjusting nut and locking bolt.
7. Replace the guard on rear of tumble dryer.



1. Locking Bolt
2. Adjusting Nut
3. Adjusting Screw
4. Cylinder Belts
5. Guide Rail
6. Idler Housing Bolts (2)
7. Adjusting Bolt (Not shown)
8. Drive Belt

Figure 65

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Maintenance

Daily

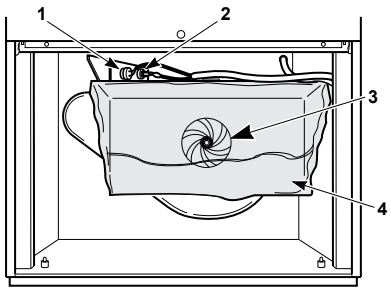
1. Inspect the area surrounding tumble dryers, remove all combustible materials, including lint, before operating the machines.
2. Check cylinder for foreign objects to avoid damage to clothing and equipment.
3. Clean lint from lint compartment and screen to maintain proper airflow and avoid overheating.

WARNING

To reduce the risk of serious injury, do not open the lint panel while the tumble dryer is in operation. Before cleaning the lint screen, open tumble dryer door and allow cylinder to completely stop.

W410R1

   a. Open the lint panel.
   b. Remove all accumulated lint in the lint compartment area. Lightly brush any lint that may be left on the lint screen.
   c. Be sure the lint screen is not torn.
   d. The lint screen is designed to completely cover the entire opening in the lint screen panel. Be sure that it does so.
   e. Wipe lint off of the cabinet high limit thermostat and thermistor. Refer to *Figure 66* .
   f. Replace the lint compartment panel on the tumble dryer ensuring a tight fit, and lock if applicable.
4. At end of day, clean the machine's top, front and side panels with mild detergent. Rinse with clean water. DO NOT use products that contain alcohol on the control panel.



1. Thermistor
2. Thermostat
3. Blower
4. Lint Screen

Figure 66

Monthly

1. Remove lint and debris from inside exhaust duct to maintain proper airflow and avoid overheating.
   a. Remove external duct and duct access covers, if present.
   b. Clean inside of duct with a vacuum.
   c. Clean dampers and make sure they operate freely.
   d. Replace duct and all access covers before returning tumble dryer to operation.
2. Ensure even lint distribution over lint screen.
3. Carefully wipe any accumulated lint off the cabinet high limit thermostat and thermistor, including perforated cover.
4. Clean lint and debris buildup from blower to maintain proper airflow.

Quarterly

1. Use a vacuum to clean air vents on drive motors.
2. Check and clean steam coils, if applicable.
3. Check flow of combustion and ventilation air.
4. Check belt tension and condition. Replace worn or cracked belts.
5. Clean the machine's top panel with mild detergent. Rinse with clean water.
6. **Models equipped with a fire suppression system:** Perform the fire suppression system maintenance test by pressing the test button in the control box.

Bi-Annually

1. Check mounting hardware for any loose nuts, bolts or screws.
2. Check gas connections for leakage.
3. Check for loose electrical connections.
4. Check steam connections for looseness and leakage.
5. Check steam filter. Replace if dirty.
6. Remove all front panels and vacuum, including coin drop mechanisms.
7. Check cylinder and front panel seals.
8. Inspect cabinet and inner panels for any damage, replace or repair as needed.
9. Clean burner tubes and orifice area of any lint buildup.
10. **Machines equipped with a fire suppression system:** All inlet and outlet hoses should be checked for any visible signs of deterioration. Replace as necessary or every five years.
11. **Machines equipped with a heat exchanger kit:** Clean the inlet and outlet with a soft brush or clean by using hot water and, if needed, a mild detergent.

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Annually

1. Remove burner tubes.
2. Clean burner tubes using water and a brush.

Fire Suppression System (Optional Equipment) Maintenance Test

NOTE: Fire suppression system only available on gas and steam models.

To ensure proper operation, the fire suppression system must be tested every three months. If the system test does not perform as indicated:

1. Discontinue use of the tumble dryer.
2. Refer to Troubleshooting Manual or contact a qualified service person.
3. Restore the fire suppression system to proper working order before using tumble dryer.

Create a maintenance record with a check box for pass, the date and a signature. Store this record in an area where it will not be damaged, but is easily accessible to person performing tests.

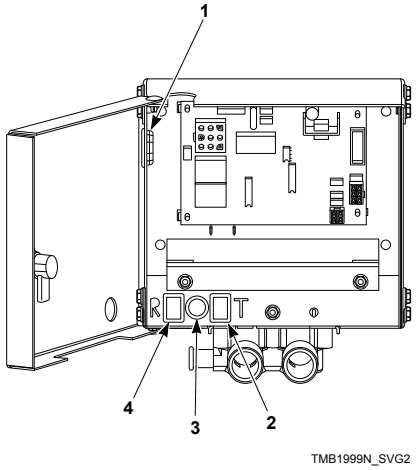
NOTE: Failure to maintain the fire suppression system will void the tumble dryer warranty.

NOTE: The auxiliary output is activated during the fire suppression system maintenance test sequence. Consider this fact prior to testing the system every three months. (Example – If the external system uses the auxiliary output to call the fire department, inform the fire department before and after the fire suppression system maintenance test.)

CAUTION

Clean up any water spilled during testing to avoid personal injury.

W487



1. Opening for Auxiliary Alarm Cable
2. Test Button
3. Light
4. Reset Button

Figure 67

To perform the fire suppression system maintenance test:

1. If the auxiliary alarm output is connected to a separate alarm system, disconnect prior to performing the fire suppression system maintenance test.
2. Remove any lint from the lint compartment.
3. Ensure temperature sensors are free of lint.
4. Place a load of dry towels in the tumble dryer. Refer to *Table 17* for proper load size. Ensure the cylinder baffles are to the left and right of the spray manifold located at the center top of the cylinder.
5. Unlock the fire suppression system control box.
6. Press and hold the test button, verify the light is on, this should take approximately five seconds. Refer to *Figure 67* . After a one-second pause water should begin to spray into the cylinder.
7. After 15 seconds of water spray, press and hold the reset button until water spray is off and light is off. This should take approximately one second. Refer to *Figure 67* and *Figure 68* .
8. Immediately remove and weigh the load. Refer to *Table 17* for acceptable weight range. If less than minimum pounds indicated in *Table 17* , the fire suppression system has failed the maintenance test. Refer to the Troubleshooting Manual.

   IMPORTANT: If the fire suppression system failed the maintenance test, DO NOT operate the tumble dryer.

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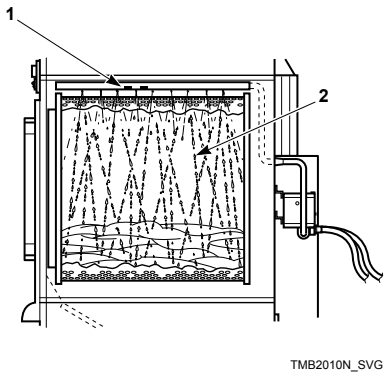
	Dry Weight	Wet Weight	Mini-mum Weight
	lbs. [kg]	lbs. [kg]	lbs. [kg]
50	25 [11]	40-44 [18-20]	35 [16]
75	40 [18]	57-61 [26-28]	52 [24]

Table 17

9. Clean up any water on the floor.
10. Lock the fire suppression system control box.
11. If the separate alarm option is being used, reconnect the auxiliary alarm output.
12. Start the tumble dryer to dry the test load.
13. On maintenance record, check box if fire suppression system passed the test, date and sign record.



1. Spray Manifold
2. Water Spray

Figure 68

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Before You Call for Service

Won't Start	Won't Heat	Clothes Not Dry	Possible Reason – Corrective Actions
•			Insert correct coin(s) or valid card if applicable.
•			Close the loading door tightly.
•			Close lint panel tightly.
•			Press the PUSH-TO-START or START pad/button.
•			Be sure power cord is plugged all the way into the electrical outlet.
•			Drying timer is in OFF position.
•			Check the main fuse and circuit breaker.
•			Check fuses located in the machine.
	•		Insufficient airflow.
	•		Gas shut-off valve in OFF position.
	•		Are controls properly set?
	•		Broken drive belt. Call the service person.
	•	•	Tumble dryer is in Cool Down Mode.
	•	•	Lint screen clogged. Clean lint screen.
	•	•	Exhaust duct to outside is blocked. Clean out.

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Removing Tumble Dryer from Service

1. Turn off electrical supply external to machine.
2. Turn off electrical disconnect on machine.
3. Turn off gas supply external to machine.
4. Turn off manual gas shut-off valve on machine.
5. Turn off steam supply external to machine.
6. Remove all electric, gas and steam connections.

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Disposal of Unit

This appliance is marked according to the European directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Refer to *Figure 69* . Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Ensuring this product is disposed of correctly will help prevent potential negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact the local city office, household waste disposal service, or the source from which the product was purchased.

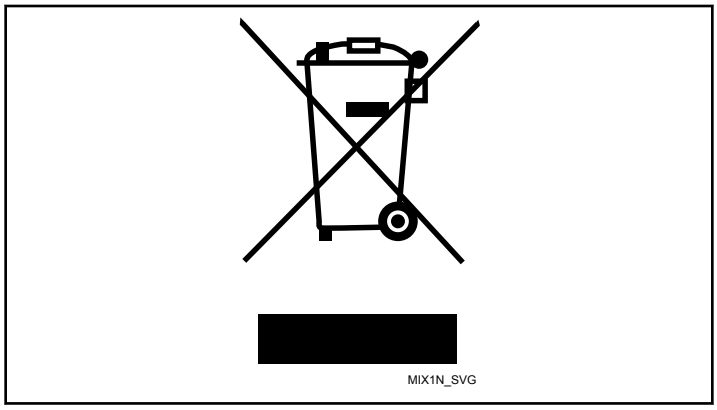

Figure 69

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